west chester state college bulletin

graduate studies catalog 1977-1978

ACADEMIC CALENDAR 1977-78

FALL SEMESTER 1977

September 6, Tuesday	Faculty Meetings
September 6, Tuesday	Classes Begin
November 23, Wednesday	Thanksgiving Recess Begins (Close of Classes)
November 28, Monday	Thanksgiving Recess Ends (8:00 a.m.)
December 17-23, 1977	Examination Period
December 23, Friday	Fall Semester Ends (Close of Classes)

SPRING SEMESTER 1978

January 16, Monday	Classes Begin
February 20 (Monday) and February 21 (Tuesday)	Presidential Holiday
March 21, Tuesday	Spring Vacation Begins (Close of Classes)
March 29, Wednesday	Spring Vacation Ends (8:00 a.m.)
May 6, Saturday	Alumni Day
May 13-19, 1978	Examination Period
May 19, Friday	Spring Semester Ends (Close of Classes)
May 20, Saturday	Graduation

SUMMER SESSIONS 1978

Pre Session	Monday, June 5 - Friday, June 23
Regular Session	Monday, June 26 - Friday, August 4
Post Session	Monday, August 7 - Friday, August 25

West Chester State
College Bulletin
1977/1978
Graduate Studies
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West Chester State College is accredited by The Middle States Association of Colleges and Secondary Schools, The National Council for Accreditation of Teacher Education, The American Association for Health, Physical Education, and Recreation, The National Association of Schools of Music, The Council on Social Work Education, and The American Chemical Society. West Chester State College is a member of The Council of Graduate Schools in the United States.

This Bulletin is not to be regarded as an irrevocable contract between the student and West Chester State College.

The college reserves the right to cancel a course at any time if its enrollment is inadequate.

West Chester State College complies with all applicable Federal and State discrimination statutes. Education programs, activities, and employment at the college are provided without regard to marital status, race, color, national origin, sex, sexual orientation, age, or religious creed. In addition, the college attempts to remove any barriers and to provide opportunity for education and employment of handicapped persons. Inquiries regarding compliance with this policy may be directed to Ms. Jeanette Sam, Director of Affirmative Action, Smith House, West Chester State College, telephone 215-436-2838.

Governor's Management Directive M410.2, 10/11/76

OFFICE OF GRADUATE STUDIES

Room 205 — Administration Building

Telephones: Area Code 215
436-2243 436-2943 436-2659

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Graduate Programs at West Chester

CERTIFICATION AND/OR MASTER OF EDUCATION

Biology
Counseling*
  Elementary School Counseling
  Secondary School Counseling
Driver Education and
  Safe Living**
Elementary Education
English
French
Geography
German
Health
Health and Physical
  Education
Instructional Media
  Education
Latin
Mathematics
Reading
Secondary
  Education
Social Science
  Concentrations in:
  History
  Political Science
  Psychology
Spanish
Special Education:
  Teaching the
  Emotionally
  Disturbed**
  (Offered periodically, as announced)

MASTER OF ARTS

Biology
English
French
Geography
History
Mathematics
  Options in:
  Pure Mathematics
  Mathematics Education
  Applied Computer Science
Music
Philosophy
Physical
  Science
Psychology
Social Science
  Geography
  History
  Political Science
  Psychology
Spanish
Speech Pathology
  Audiology
Teaching English
  as a Second
  Language

MASTER OF MUSIC

Music Education
Music Theory or
  Composition
Performance

MASTER OF SCIENCE

Chemistry
Counseling
  Higher Education Counseling
Criminal Justice
Educational Research
Health
Health and Physical
  Education
Instructional Media

*At West Chester State College, the Master's Degree is required for those seeking certification in Counselor Education
**Certification only

Graduate Studies at West Chester

Objectives: West Chester is committed to broadening the scholarship of the graduate student and the professional skills of the educator while arousing all students to the challenge of research.

THE GRADUATE STUDIES PROGRAM at West Chester has grown remarkably since its introduction in 1959. About 1,900 students now attend during the fall and spring semesters; some 3,000 enroll for its summer sessions. West Chester State College's graduate program is the largest within the 14 Commonwealth-owned institutions of higher learning.

The college began as the West Chester Academy in 1812 and functioned as a normal school from 1871-1927. Since it became a four-year college in 1927, West Chester has developed steadily and is now one of the major comprehensive colleges in the vicinity of Philadelphia.

Its' facilities for graduate education are excellent thanks to the Commonwealth's building program begun in the 1950's and still underway. Examples are the Schmucker Science Center, a block-long complex of buildings including a planetarium, astronomical observatory, television studio, and modern laboratories; Elsie O. Bull Learning Research Center; the Health and Physical Education Center, one of the nation's outstanding research facilities in the field; and the Francis Harvey Green Library, which is one of Pennsylvania's principal college libraries.

The college offers the Master of Arts, the Master of Education, the Master of Music, and the Master of Science degrees in nearly forty disciplines or areas of study. (See the chart facing this page.)

Many of the new master's degree programs such as the M.A. in speech pathology, the M.S. in criminal justice and the computer science option in the M.A. in mathematics have been designed to meet the particular needs of the times and the area.

Along with its degree and certification programs, West Chester offers non-degree study in a number of areas including art, economics, nursing, linguistics, speech communication, theatre arts, special education, and urban education.

For the benefit of in-service teachers and employed persons, West Chester schedules its graduate classes during late afternoons and evenings during the fall and spring semesters and during the first of the three summer sessions.

Graduate Summer Sessions

The 12-week summer sessions are divided into three periods: the Pre-Session of three weeks, the Regular Session of six weeks, and the Post Session of three weeks. All Pre-Session classes meet in the evenings; almost all classes for the other two sessions meet during the daytime. (To apply, see Admissions)—Admission to summer session courses does not constitute admission to a degree program.

The Campus

The college occupies 547 acres in the beautiful rolling countryside of Chester County. The main campus of the college occupies 94 acres within the Borough of West Chester; South Campus is located on a 291-acre tract in adjacent townships.

The Borough of West Chester has been the seat of government in Chester County since 1786. With a population of about 20,000, the Borough proper is small enough to have the pleasant aspects of a tree-shaded American town, large enough to provide essential services and the substance of a vigorous community, and old enough to give the student first-hand touch with America's early history.

The heart of West Chester is its courthouse, a Classical Revival building designed in the 1840's by Thomas U. Walter, one of the architects for the Capitol in Washington, D.C. The town was settled in the early eighteenth century principally by members of the Society of Friends; charming traces of their culture remain in the community.

West Chester today is part of the rapidly growing suburban complex surrounding Philadelphia and offers interesting opportunities for the study of local, county, and regional government in a period of change and growth.

Philadelphia is 25 miles to the east and Wilmington 15 miles to the south of the campus. Thus the libraries, museums, and other cultural and historical resources of both cities are within easy reach. Valley Forge, the Brandywine Battlefield, Longwood Gardens, and other historical attractions are near West Chester.

Welkinweir

West Chester's most recent land acquisition is Welkinweir, the 166-acre, northern Chester County estate which was presented to the college as a gift by Mr. and Mrs. Everett G. Rodebaugh.

The stone mansion at Welkinweir dates back to 1750 with an 1800 addition as well as a wing added in 1940. Filled with a remarkable collection of historically valuable books, antiques and objets d'art, the residence is now used for concerts, seminars and conferences.

Highlights from among the contents include numerous authenticated Chester County pieces of furniture, an E.M. Skinner Automatic Pipe Organ (one of only five still in existence in working order in the country), a Mason & Hamlin Piano, antique clocks, an English silver collection, and a variety of oriental rugs.

The Welkinweir's grounds contain a six-acre, man-made lake and seven ponds; lawns; forested areas; and unusual plantings. Access to the Appalachian Trail can be made from the Horseshoe Trail which passes through the property.

How to Reach West Chester

ROUTE 3 (West Chester Pike) from Philadelphia.
ROUTE 100 SOUTH from Downingtown Interchange of Pennsylvania Turnpike.
ROUTE 202 SOUTH from Valley Forge interchange of Pennsylvania Turnpike.
SEPTA BUSES from 69th Street Terminal in Philadelphia.
PENN CENTRAL RAILROAD from Philadelphia to West Chester (limited schedule).

Undergraduate Studies

Some 6,000 full-time and another thousand part-time students are enrolled in the college's undergraduate program. The college grants the Bachelor of Science in Education in four basic curricula—elementary education, secondary education, music education, and in speech pathology and audiology; the Bachelor of Arts degree in arts and letters, social and behavioral sciences, the natural sciences, mathematics, and music; the Bachelor of Science degree in chemistry, and the Bachelor of Music degree.

Degree programs preparing students for specialized work in business administration, computer and information sciences, criminal justice, nursing, social welfare, and speech pathology and audiology are offered.

The Admissions Office will supply an undergraduate catalogue upon request.

Admission

West Chester State College welcomes all qualified students and is committed to affirmative action to assure equal opportunity for all persons regardless of race, color, religion, national origin, sex, age, or the existence of physical handicap.

Students with a bachelor's degree from an accredited college or university in the United States or with equivalent preparation acquired in another country are eligible to apply for admission as **degree** or **non-degree** students. **Non-degree** students include those seeking certification, cultural growth, or strengthened backgrounds for various professional and industrial occupations.

The college is primarily committed to meeting the educational needs of Pennsylvania residents. If space is available, well-qualified out-of-state students are considered for admission.

Student Responsibility

It is the responsibility of the students to know and observe all regulations and procedures for their programs and to read this catalogue thoroughly. The college will not waive a regulation because a student pleads ignorance of it. A student planning to graduate should give careful attention to the dates relating to application for graduation and to other pertinent deadlines announced by the department or the Graduate Office.

The Application Procedure

1. An application form must be secured from the Graduate Office, completed, and returned to the Graduate Office.

2. Applicants must request all institutions at which they have taken any post-secondary work to submit two official transcripts directly to the Graduate Office. Transcripts mailed or delivered by applicants are not acceptable.

3. The $10 application fee should be sent to the Business Affairs Office.

4. Applicants who have unusual problems or questions are advised to request an interview with the dean of graduate studies.

Application Deadline. Degree candidates should apply at least two months before registration for the semester or summer session in which they wish to enroll.

Notification of Admission. Applicants will be notified by letter of the acceptance or rejection of their applications.

Registration

Those who have been accepted as graduate students will receive registration instructions by mail prior to each semester and the summer session.

Admission Requirements for Degree Students

1. A baccalaureate degree from a college or university accredited in the United States or its equivalent from a school in another country.

2. A cumulative average of at least 2.50 and a grade of at least 2.75 in the area of concentration. (A equaling 4)

3. Scores from the Graduate Record Examination or the Miller Analogies Test if these are required for admission to the program in which the student wishes to enroll.

4. Approval by the school offering the desired degree program. Before such approval is given, an interview with a faculty member of the School may be required. The applicant must also meet any other additional requirements established for the degree program. *(The applicant must arrange for this interview.)*

5. Approval by the dean of graduate studies.

6. Space available in the department.

An applicant who meets the grade requirements but has academic deficiencies may be granted provisional status. The department chairperson or school coordinator will specify course work which must be taken to remove such deficiencies and which will not be credited to degree requirements.

Admission to degree study does not constitute admission to degree candidacy. After a student has satisfactorily fulfilled certain course requirements specified in the degree program and has completed 12 to 15 semester hours of work, the student applies for admission to degree candidacy.

Admission Requirements for Non-Degree Students

1. A baccalaureate degree from a college or university accredited in the United States or its equivalent from a school in another country.

2. A cumulative average of 2.0 (with A equaling 4).

3. A properly completed application form approved by the department in which the student expects to enroll.

4. An interview with a school official if special questions arise during the evaluation of the application.

Admission is dependent upon the availablity of space in the desired department or program of study.

Those admitted as non-degree students may include applicants who fail to qualify as degree students. There is no assurance that courses taken under non-degree status may be used later to satisfy degree requirements.

Auditors

An auditor is a student who attends classes but who does not necessarily do other work required of students in the course. The auditor need not meet normal admission requirements but must obtain approval to audit from the department chairperson or program coordinator and the course professor. Auditors pay the regular basic fee and must file the usual formal application for admission to the college. The student cannot receive credit for courses taken as an auditor.

Transfer of Credit

Applicants to a degree program at West Chester who have earned credits through previous graduate study at another college or university may transfer credit under certain circumstances.

1. The credits must have been earned at an approved graduate school.

2. The courses taken must be essentially the same as courses offered at West Chester and must be approved by the department of school in which the applicant intends to enroll at West Chester.

3. No more than six credits may be transferred.

4. The grade earned for courses to be transferred must be B or better (A equals 4).

5. Two official transcripts must be submitted. These must be sent by the institution which granted the credits directly to the Office of Graduate Studies, and they must clearly indicate that the courses to be transferred are graduate courses which were given graduate credit.

6. Credits received on continuing-education or undergraduate transcripts do not qualify for graduate transfer credit.

7. The courses for transfer must have been taken recently enough to fall within the six-year time limitation.

Admission of Foreign Students

Students from foreign countries may be admitted to the graduate program provided they meet certain special requirements. Foreign students, like other out-of-state students, are accepted only when space is available.

All applications and supporting documents must be on file in the Graduate Office no less than four months before the student proposes to enter the country.

The Graduate Office must receive evidence of satisfactory performance on the Test of English as a Foreign Language (unless English is the applicant's native language) before application forms can be processed. Information about the **TOEFL** test, including test dates and locations in foreign countries, can be obtained from the Educational Testing Service, Box 899, Princeton, N.J. 08540, U.S.A. Registration forms must reach Princeton at least five weeks before the test is to be taken.

The information and documents which must be presented are

1. A completed application form.

2. An official copy of the school certificates, showing the date issued, for all work done beyond the elementary level.

After the application and supporting documents have been reviewed, the Graduate Office will notify the applicant of its action. Foreign students are urged to remain in their own countries until they have received notice of acceptance. The college cannot assume responsibility for their housing or welfare. Once a foreign student has been admitted, college authorities will make every reasonable effort to find suitable housing, but—except during summer sessions—West Chester does not provide dormitory accommodations for graduate students and cannot guarantee a place of residence.

Degree Candidacy and Degree Requirements

Requirements for Admission to Degree Candidacy

Application for degree candidacy should be made within the first 12 to 15 semester hours of the pre-candidacy period.

During the pre-candidacy period the student must:

1. Complete those courses which the department or program specifies as prerequisite to degree candidacy.
2. Perform satisfactorily on examinations which the department or program may require for admission to degree candidacy.
3. Maintain an overall average of at least 2.75 and an average of at least 3.00 in the concentration.
4. Show evidence of academic, personal, and professional qualities which satisfy the administrators of the graduate program.

Procedure for Application to Degree Candidacy

1. The student must file an application for admission to degree candidacy with the dean of graduate studies. Forms are available in the Graduate Office.
2. When the application has been evaluated by the department concerned, the dean of graduate studies will send a letter of acceptance or rejection to the student.
3. Upon notice of acceptance, degree candidates must confer with their advisors to establish a program of study.

Reapplication for Degree Candidacy

Applicants who fail to qualify as degree candidates may reapply. They must attain an average of 3.00 in course work **specified by their advisor.**

Retention in a Degree Program

The record of a student whose grade point average falls below 3.0 in his major field and 2.75 overall after acceptance to degree candidacy will be reviewed by the department advisor. If, after 24 hours of work in a degree program, the student's grade point average is still below a 3.0 in the major field and 2.75 overall, the student will be dropped from the program. An appeal for readmission may be made to the dean of graduate studies.

Summary of Requirements for the Master's Degree

1. Admission to degree candidacy.
2. Completion of all required courses with a cumulative average of 2.75, an average of 3.00 in the field of specialization, and achievement of satisfactory scores on the Graduate Record Examination, if required, or the Miller Analogies Test, if required. (See program requirements.)
3. Satisfactory performance on a final written and/or oral comprehensive examination conducted by the student's advisory committee in the field of specialization. (It is the responsibility of the candidate to apply for this examination.)
4. Submission and approval of the thesis in those programs requiring it.
5. Fulfillment of any special examinations, requirements, or competencies which are peculiar to a department or a school.
6. Fulfillment of all financial obligations to the college, including payment of the graduation fee, and of all other obligations including the return of college property.
7. Compliance with all academic requests from the dean of graduate studies, including submission of a letter of intent to graduate by the specified due date.

Additional Requirements for the Master of Education Degree

In addition to fulfulling these requirements, candidates for certain of the Master of Education degrees must give evidence of successful teaching experience approved by the department chairperson. Other experiences in lieu of this requirement must be approved by the dean of graduate studies.

Fees and Expenses

Fees and Expenses are subject to change without notice.

Unless otherwise specified, fees are paid by check or money order made payable to: Commonwealth of Pennsylvania. Your canceled check or money order record serves as your receipt.

BASIC FEE

(as of Spring Semester 1977)

Legal Residents of Pennsylvania

Less than 9 credits	$43 per semester hour of credit
9 through 15 credits	$400 per semester
More than 15 credits	$400 plus $43 for each semester hour of credit beyond 15

Out-of-State Students

Less than 9 credits	$63 per semester hour of credit
9 through 15 credits	$750 per semester
More than 15 credits	$750 plus $63 for each semester hour of credit beyond 15

APPLICATION FEE

The $10.00 Application Fee should be sent directly to the Business Office.

CREDIT BY EXAMINATION

A fee of $25.00 is paid at the College Business Office at the time the examination is scheduled. Forms are available at the Business Office.

LATE REGISTRATION FEE

A late registration fee of $25.00 is required of students completing registration after the official registration deadline.

COMMUNITY CENTER FEE

Students pay a Community Center Fee based on the number of credits carried, as follows:

1 through 6 credits	$2.50 per semester
7 through 8 credits	$5.00 per semester
9 credits or more	$10.00 per semester

The community center fee is not refundable.

COURSE AUDIT FEE

Students who audit a course (attend a course without taking credit) pay the same fees as other students.

NON-HONORED CHECK FEE

A fee of $10 is charged to accounts where a stop-payment order has been entered for a check sent in payment and for checks returned marked "Insufficient Funds." The late registration fee of $25 will also then be charged to the account.

TRANSCRIPT FEE

$1.00 per copy. After graduation, the first copy of the transcript will be sent without charge. Graduated students pay the fee for all copies made thereafter. Transcript request forms are available in the Graduate Office.

MUSIC FEES

In addition to the basic fee, graduate students in music are billed according to the following fee schedule:

Piano, Organ, Instrument, or Voice—
one half-hour lesson each week — $55 per semester

Instrument Class or Ensemble—2 hours per week — $35 per semester

Rentals

Any Band or Orchestra Instrument — $6.00 per semester
$1.00 per week in summer sessions

Organ — ($12.00 per semester) $2.00 per week in summer sessions.

WITHDRAWAL PROCEDURE

Students who wish to withdraw from the college after paying their semester or summer session fees must follow the official withdrawal procedure. Withdrawal forms are available in the Graduate Office. Completed forms must be returned to the Graduate Office during the semester or summer session when the withdrawal occurs.

REFUND POLICY

All refund requests must be made during the semester or session for which the refund is requested. Forms, which are available in the Graduate Office, should be completed and returned to the Graduate Office.

Basic Fee Refunds:

First through Second Week: Full-time students who withdraw completely forfeit $75.00.
Part-time students who withdraw completely and students who drop courses receive an 80% refund.

Third Week: All Students—70% refund of basic fees.
Fourth Week: All students—60% refund of basic fees.
Fifth Week: All students—50% refund of basic fees.
After Fifth Week: No refund of basic fees.

The community center fee is non-refundable.

Refunds will not be made to students who are suspended or who are dismissed or who drop courses without the approval of the dean of graduate studies.

PLEASE REFER TO THE SUMMER GRADUATE CATALOG FOR SUMMER SESSION FEES AND POLICIES.

GRADUATION FEE

A graduation fee of $24 is required of all degree candidates. No degree will be granted until this fee is paid. Checks should be drawn to "Commencement Fund" and delivered to the Graduate Office on or before the due date.

VEHICLE PERMIT

(Cash or check drawn to Intracollegiate Governmental Association)

Students who wish to park their vehicles in campus lots are required to have a vehicle permit which may be obtained at registration. The owner's registration card for the vehicle must be presented. The cost of the permit for a full year is $2.00, for Pre or Regular Session, $1.00, for Post Session, 50¢. All permits expire in the September following month of issue.

LIBRARY CARD/I.D. CARD

In order to borrow books from the library, graduate students must present identification, either a library card or an I.D. (identification) card. The fee for either card is $1.00. The I.D. card is purchased at the IGA Office, the library card at the library.

Financial Aid

LOANS

National Direct Student Loan Program
The National Direct Student Loan Program is a cooperative effort of the federal government and West Chester State College which enables qualified students to secure long-term educational loans under attractive conditions. The law requires that each borrower be:

1. Enrolled or accepted in the institution participating in the program.

2. Carrying at least 1/2 the normal full-time workload as determined by the institution.

3. In need of the amount of the loan to pursue a course of study.

4. Capable, in the institution's opinion, of maintaining good standing in the curriculum.

Under the law, graduate student may borrow up to $2,500 per year with the combined total of undergraduate/graduate loans not to exceed $10,000. Approval of loans depends upon the student's financial need and the availability of loan funds. For further information contact the director of financial aid.

Pennsylvania Higher Education Assistance Agency
Loan Guaranty Program
The Student Loan Guaranty Program is a cooperative effort of private lending institutions and the state and federal governments which enables qualified students to secure long-term educational loans under attractive conditions. To be eligible for a loan, a student must:

1. Be a domiciliary of Pennsylvania for 30 days immediately prior to the date of filing a loan guaranty application.

2. Be accepted for enrollment in an approved institution or, if enrolled, be in good standing.

3. Meet satisfactory character requirements and citizenship requirements.

4. Be classified as at least a half-time student.

The maximum loan per academic grade level for full-time graduate students is $5,000, for half-time graduate students, $2,500. The total indebtedness permissible for all years of undergraduate and graduate study is $15,000. For further information contact the director of financial aid.

GRADUATE ASSISTANTSHIPS

A number of graduate assistantships are available to qualified graduate students. Interested students are advised to consult the department chairpeople to determine the availability of assistantships and the candidate's eligibility for assignments. Assignments may involve part-time undergraduate teaching, participation in research projects, or other professional duties under faculty supervision.

Beginning graduate assistants are paid at the rate of $2,705 for the academic year and course fees are waived.

RESIDENT DIRECTORS

Opportunities to serve as resident directors for undergraduate students are open to men and women graduate students. Directors live in the college residence halls and provide direction for the personal, social, and educational development of the resident students. These positions are funded through the Civil Service program. Remuneration also includes room and board. Applications can be made through the Office of Student Development, Room 206, College Union Building. (Telephone 436-3305.)

Academic Information and Regulations

See also Degree Candidacy and Degree Requirements

Classification of Students

Students are classified as:

A. Degree Students

1. Full graduate standing—granted to a student who meets all admissons requirements.
2. Provisional graduate standing—may be granted to a student who:
   a. Has not taken the Graduate Record Examination, the Miller Analogies Test, or a specialized entrance examination required by the department concerned.
   b. Is unable to present all prerequisites required by the department.
   c. Has certain other academic deficiencies.
   d. Fails to meet the academic average required for a degree student.

B. Non-Degree Students

1. Certification—applies to students taking course work to gain teacher certification.
2. Professional growth—students who take graduate course work but seek neither a degree nor certification.

Adivsory System

All students will be assigned an advisor in the department of their choice. Students are expected to take the initiative in scheduling interviews with their advisors during their course of study.

Time Limitations on Degree Programs

All courses to be included in the degree program of study must be completed within a six (6) year period. This limitation also applies to courses taken elsewhere and accepted at West Chester as transfer credit applying to degree requirements.

In unusual cases, such as military service or prolonged illness, a limited extension of time may be sought by written petition to the dean of graduate studies.

Students are reminded that their research report or thesis must be completed within the six-year limitation.

Re-Examination Policy for Students Who Exceed the Time Limitation

Students who wish to re-enter a degree program after losing their status by exceeding the time limit may regain credits toward the degree by re-examination. Such students should consult with the dean of graduate studies to obtain permission for re-examination.

Student Load

The normal work load for a full-time student during the fall and spring semesters is 9 semester hours. The load may be increased if approval has been obtained from the student's advisor.

During the summer session, the normal work load is one semester hour of work for each week of enrollment. Generally, students carry only one course during the Pre or Post Session. If permission has been given by the dean of graduate studies, students may carry more than six semester hours of work in the Regular Session.

Course Credit by Examination

A graduate student may obtain course credit through examination. Application must be made through the Graduate Office, and the student's advisor must approve the application.

Transferring Credit from Other Institutions

West Chester students who wish to take course work at other institutions for credit at West Chester must first obtain approval from their chairman or coordinator. Other restrictions and requirements are the same as those given in "Transfer of Credit," page 6.

Change of Status

A provisional degree student may petition for full graduate standing by making a written request to the Graduate Office. Credit earned as a provisional degree student or as a non-degree student may be accepted in a degree program only upon the recommendation of the student's advisor. Provisional degree students should consult their advisors well in advance in order to select work appropriate for transfer toward the degree.

Changing to Auditor Status

Before the sixth meeting of a class during a semester or an equivalent period of time during summer sessions, a student may apply to become an auditor by completing a change-in-class-status form available in the Graduate Office and obtaining necessary approval.

Changes in Program

In order to change from one program to another, the student must:

1. Obtain a change-in-curriculum form from the Graduate Office.

2. Have the form signed by the two chairpersons or program coordinators and the two deans (or associate deans for graduate study) concerned in the program change.

3. Present the completed form to the Graduate Office which will notify the applicant in writing of the action taken on the request.

Withdrawal from Courses in Fall or Spring Semesters

A student finding it necessary to withdraw from a course should:

1. Obtain a withdrawal form from the Graduate Office.

2. Obtain signatures of the course professor, the department chairman or program coordinator, and the school dean or the associate dean for graduate studies.

3. Return the signed form to the Graduate Office **before the end of that semester.**

Students who drop a course—either before or after six class meetings—without following the course-withdrawal procedure will receive an F on their

permanent records and will forfeit any right they may have had to a refund.

If a student withdraws before the sixth meeting of a class, the withdrawal will be viewed as a cancellation of enrollment, and the course will not be entered on the student's academic record. The student is entitled to a refund. See Fees and Expenses.

A student who attends six or more meetings of the class will not be eligible for a refund, and the course will be entered on the student's permanent grade record either as a WP or as a WF.

Withdrawal from Courses in Summer Sessions

Students who have attended one day of classes during any summer session may not cancel enrollment and are not entitled to a refund. Students who stop attending classes in which they are enrolled will receive a WP or WF for the course.

In order to withdraw officially from summer session classes, a student must submit a completed summer session withdrawal form to the Graduate Office **before the end of end of that summer session.**

Withdrawal from the College

A student intending to withdraw completely from the graduate program must comply with the procedures outlined above and, in addition, give the dean of graduate studies written notice stating the reason for the withdrawal. The student's last day in classes will be considered the student's termination date.

Class Attendance

Absence from classes does not exempt the student from course responsibility. If an examination is missed, the student must arrange promptly for a make-up examination.

Attendance in Inclement Weather

Although the college generally convenes classes regardless of weather condition, students are not asked to drive on hazardous roads. However, they must assume responsibility for work missed. See College Policy for Storm Closings, Page 24.

Grading System

The following grading system is used:

Grade	Interpretation	Quality Points
A	Superior	4
B	Above Average	3
C	Average	2
D	Below Average (see below)	1
F	Failure	0
I	Incomplete (see below)	
WF	Withdrew Failing	0
WP	Withdrew Passing	
Aud	Audit	

Degree students must repeat any required course for which they have received a D or F grade. All grades received for a course will remain on the student's record, but only the highest grade achieved will be used to calcu-

late the cumulative average. A form for reporting repeated courses must be obtained from the Graduate Office, completed, and returned there.

Removing Incompletes

Students must complete courses for which they have received an Incomplete within the next 90 calendar days or the I will become an F. The student must file in the Graduate Office a request for an extension of this time limitation which has been endorsed by the faculty member who entered the Incomplete. The 90-day requirement does not apply to Independent Study nor to the thesis, research report, or practicum.

Grade Reports.

Grade reports are mailed to the student soon after the end of a semester or summer session. Students are reminded to check their reports against grade requirements and other regulations and to have their reports at hand when consulting with advisors.

Obtaining Transcripts

Transcripts of work taken at West Chester may be obtained from the Graduate Office. A check or money order, payable to the Commonwealth of Pennsylvania, must accompany a written request which should include the period of attendance at the college, the curriculum pursued, Social Security number, and any change of name during enrollment. For transcript fee, see Fees and Expenses.

Changes in Name or Address

Students should notify the Graduate Office immediately of any change of address or change in name.

Graduate Record Examination

Scores for the Graduate Record Examination are required for many of the degree programs, either at the time of application or at some later date. The prospective degree student should consult the appropriate program outline.

The Graduate Record Examination is administered by the Educational Testing Service, Box 955 Princeton, New Jersey 08540 and consists of the Aptitude Test (morning test) and the Advanced Tests (afternoon tests in the fields of concentration). Application forms and data may be obtained either by writing directly to the service or from the Counselling Center, Room 129. Application forms must be filed with the Educational Testing Service at least 15 days prior to the date of any examination.

The examinations may be taken at any of the testing centers designated by the Educational Testing Services. These tests are administered periodically at West Chester—generally in October, December, February, April, and June.

Miller Analogies Test

Some degree programs require students to take the Miller Analogies Test which is administered through the Counseling Center, Room 129, Lawrence Center. It requires less than two hours and is given by appointment. Students requiring the test should telephone the center (436-2301) at least three weeks before a test date is needed. Once a date has been established, the student must pay an $8.00 fee in person to the Office of Business Affairs. The fee receipt must be presented to the center before the M.A.T. will be administered.

The Comprehensive (Area of Specialization) Examination

The comprehensive examination covers the student's major field and is constructed, administered, and evaluated by the faculty of the student's major department or program. Successful performance on the comprehensive examination is a requirement for all master's degrees granted by the college. The candidate must apply for the examination.

Other Examinations

Other examinations may be required of degree students. All requirements given under the heading of the particular program should be carefully noted.

Research Requirements

Students should consult specific programs to determine whether independent study directed toward either the thesis or a research report is required, offered optionally, or omitted.

Letter of Intent to Graduate

The degree student must file a letter of intent to graduate with the dean of graduate studies and the department chairman or program coordinator on or before the date specified by the Graduate Office.

Submitting the Thesis for Binding

Upon its approval by the school or department, the thesis must be typed in accordance with specifications which may be obtained from the school or department. Three copies of the typed thesis together with three copies of the abstract (250-500 words) must be submitted to the Graduate Office for binding. Candidates who wish additional bound copies should submit as many copies as are desired. The cost of binding is $6.00 per copy.

Permanent Certification

The Instructional II (Permanent) Certificate shall be a permanent certificate issued to an applicant who has completed three years of satisfactory teaching on an Instructional I Certificate attested to by the superintendent of the school district in which his most recent service was performed, or in the case of an intermediate unit, the executive director, or in the case of an approved non-public school, the chief school administrator. In addition the applicant shall have completed 24 semester hours of collegiate study at an approved four-year institution and subsequent to the conferring of the baccalaureate degree.

IN-SERVICE PROGRAMS. The 24-semester-hour requirement may be satisfied, in whole or in part, through in-service programs approved by the Secretary of Education of the Commonwealth.

Renewal of Instructional I Certification

The Instructional Certificate is valid for three years of teaching in approved schools of the Commonwealth. The three years need not be consecutive. The certificate may be renewed for three additional years of teaching after the completion of 12 additional semester hours of post-baccalaureate, graduate or approved in-service credit. A renewal should be requested through the school superintendent's office.

Educational Specialist Certification

Commonwealth regulations also provide for certification as an educational specialist to those persons who successfully complete an approved program

of study and have the recommendation of the training institution. The Educational Specialist Certificate is issued on two levels.

Educational Specialist I (Provisional). The Educational Specialist I Certificate shall be issued for entry into a professional position in the schools of the Commonwealth. The applicant shall have completed an approved program of studies, shall possess a baccalaureate degree, and shall have been recommended for certification by the preparing institution.

Educational Specialist II (Permanent). The Educational Specialist II Certificate shall be a permanent certificate issued to an applicant who shall have completed three years of satisfactory service on an Educational Specialist I Certificate, and who shall have completed 24 semester hours of post-baccalaureate or graduate study at a regionally approved institution. In addition, the applicant shall have received the recommendation of the superintendent of the school district in which his most recent service was performed, or in the case of an intermediate unit, the executive director, or in the case of an approved non-public school, the chief school administrator.

Directory Information

West Chester State College has, in the past, made public certain kinds of information about students, such as the names of those who receive scholarships, who hold offices, or who are members of athletic teams. Various kinds of campus directories are published throughout the year to help members of the College community locate and communicate with each other. The commencement programs publish the names of those who have received degrees during the year.

The Family Educational Rights and Privacy Act defines the term "directory information" to include the following categories of information: the student's name, addresses, telephone numbers, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. The college will limit information which is made public to categories such as these but will not necessarily publish all such information in every listing.

Students who **do not wish** to have any or all of such "directory information" published without their prior consent must file notice—undergraduate in the Office of the Registrar and graduate students in the Graduate Office. A signed, dated statement specifying items not to be published must be brought by the student to the appropriate office within the first fifteen calendar days after the beginning of the fall semester.

Graduate Level Course Numbering System

500 Series Graduate level courses to which advanced undergraduates might be admitted.

600 Series Graduate courses not normally open to undergraduates. They require the ability to operate on a mature scholarly level.

Course numbering within a series is at the discretion of the department offering the courses.

College Services and Student Living

The Francis Harvey Green Library offers the graduate student an excellent environment for study and research. The first section of the building was completed in 1966 and the six-story addition was dedicated in the fall of 1976. The library complex contains a graduate study and lounge, seminar rooms, a special collections room, a map room, an enlarged instructional materials center with audio-visual facilities, an enlarged periodicals collection, and increased micro-reading facilities.

The general collection of more than 332,000 volumes and 2,500 periodicals is augmented by an extensive micromedia collection representing more than 300,000 volumes including books, periodicals, newspapers, and doctoral dissertations. The special collections include the Chester County Collection of Scientific and Historical Books; the Normal Collection (publications by and about the faculty and alumni); the Ehringer Collection (a collection of historical books on physical education); the Biographies of the Signers of the Declaration of Independence by John Sanderson; and the Shakespeare Folios. Other collections of note are the children's curriculum, government documents, music collections and the Philips collection of autographed books.

The college library, through its staff of 13 professional librarians, provides the services required by students and faculty working in all areas covered by the college's instructional programs.

Bureau of Research and Related Services

The Bureau of Research and Related Services fosters the development of basic, applied, and institutional research and provides facilities for the tabulation and analysis of research data. The research function of the bureau encompasses studies initiated by the faculty and administrative staff as well as studies jointly sponsored by the college and various educational agencies and foundations.

The Bureau assists faculty and students in securing financial support for their research projects.

Data Processing services include the tabulating and summarizing of information required by various administrative divisions of the college.

The computer center, statistical laboratory, and research facilities are housed in the Learning Research Center.

Housing

West Chester provides housing facilities for its graduate students only during the Summer Sessions when room and board are available for single men or women through the Office of Student Development in the Sykes College Union Building. Graduate students are expected to abide by the housing regulations governing undergraduate students.

The college has no facilities for housing married students. Area newspapers and realtors should be consulted.

College Policy for Storm Closings

If storm conditions make it necessary to close the college, announcement will be made over most area radio and television stations which employ a system of code numbers. West Chester's numbers are:

853	Day Classes for Undergraduate Students
2853	Graduate Classes and Other Evening Classes

Student Health Service

Two part-time physicians and five registered nurses are available to meet emergency and first-aid needs and to perform routine infirmary treatment of minor illnesses and minor surgical conditions at no cost to students. The college does not furnish other medical care nor bear the costs of medical or surgical treatment or hospitalization. The community of West Chester has qualified physicians and excellent hopsital facilities. The service is in Reynolds Hall where, for emergencies, a nurse is on duty on a 24-hour basis except from midnight Saturday to 8 A.M. Sunday.

Only full-time graduate students may take advantage of a group medical and accident policy, approved by the college and covering accidents and illness on a twelve-month basis. The policy may be obtained at a minimal annual premium cost from the health service.

Counseling Center

Staffed by psychologists trained to work with college students, the Counseling Center offers professional counseling and psychological services to students with educational, vocational, personal, social and emotional problems and concerns. Counseling is offered on an individual and small group basis, and varies with the needs of each student. All interested and test results are *strictly confidential.*

These services are available to all West Chester State College students at no charge. Students may make appointments by phone (Call 436-2301) or by going to the Counseling Center Office, Room 129, Lawrence Center. Every attempt is made to see students that same day.

Speech and Hearing Clinic

Graduate students who need help in meeting minimal speech standards may use the services of the Speech and Hearing Clinic at no cost. The clinic is conducted by the Department of Speech Pathology and Audiology in Wayne Hall.

Career Development Center

The college provides career planning and placement services for its students and graduates.

The Career Development Center libraries provide information about careers, Civil Service appointments, application forms, procedures, and job requirements.

The services are available to graduate students at no cost, subject to the following college policy:

1. Students who have satisfactorily completed more than 15 semester hours of graduate study at West Chester or who hold undergraduate degrees from the college are eligible for the full services of the office. Full services include: registration, development and mailing of credentials to prospective employers, career counseling,

use of private facilities for on-campus interviews arranged by the applicant, and participation in a program of on-campus interviews arranged by the Career Development Center.

2. Graduate students whose baccalaureate degrees were not received at West Chester and who have satisfactorily completed less than 15 semester hours are eligible for limited service use of the Career Development Center libraries and guidance from the staff.

The Career Development Center is located in Lawrence Center.

Veterans' Affairs

The Office of Veterans' Affairs is located in the Old Demonstration School. All veterans, certain dependents of disabled or deceased veterans, and war orphans who wish to obtain educational benefits under the appropriate public laws must register with the Office of Veterans' Affairs during college registrations. The Veterans Administration requires students who are veterans to schedule at least eight semester hours per semester in order to receive full-time benefits under the G.I. Bill.

A representative of the Veterans Administration who counsels and who acts as liaison between students and the Veterans Administration Center is a member of the office staff.

Honor Societies

The School of Education sponsors an active chapter of Phi Delta Kappa, the international graduate honor society. Membership in the West Chester chapter, which was organized in 1956, is by invitation and recognizes scholarship in all fields of education.

Graduate students are eligible to participate in the activities of the undergraduate honor societies at West Chester if they have been members during their own undergraduate years. These organizations, which are described in the West Chester State College Undergraduate Bulletin, recognize academic achievement and professional interest in the field of foreign languages, geography, health and physical education, history, mathematics, music, psychology, and social sciences.

Cultural Events

Students are urged to attend the excellent cultural programs at West Chester. Among these are the All-Star Series, the William Pyle Philips Lecture Foundation Series, the Campus Cinema Club, the Intracollegiate Governmental Association evening series of programs, Little Theatre productions in the Studio Theatre and Turk's Head Playhouse, and recitals and concerts given by faculty and students of the School of Music. A calendar of events may be obtained from the Office of Cultural Affairs and college Events, Lawrence Center.

Sports Activities

Opportunities for sports and recreational activities are provided by the School of Health and Physical Education. For details, contact the Coordinator of Recreation, Health and Physical Education Center.

Programs of Study

Requirements and Course Offerings

Graduate course offerings are divided among the Schools as follows:

School of Arts and Letters

Art
English
Foreign Languages
Philosophy
Speech Communication and Theatre
Speech Pathology and Audiology

School of Education

Counselor Education
Elementary Education
Instructional Media Education
Secondary Education and Professional Studies
Educational Research
Reading
Special Education
Urban Education

School of Health and Physical Education

Health Education
Physical Education

School of Music

Music Education
Music History and Literature
Music Theory and Composition
Instrumental Music
Keyboard Music
Vocal and Choral Music

School of Sciences and Mathematics

Biology
Chemistry
Earth Sciences
Mathematical Sciences
Nursing
Physics

School of Social and Behavioral Sciences

Anthropology, Sociology, and Social Welfare
Business and Economics
Criminal Justice
Geography and Planning
Government and Politics
History
Psychology

For the convenience of readers the arrangement of course offerings is alphabetical by field or area of study.

Anthropology, Sociology, and Social Welfare

Mr. Murphy
Chairperson

PROFESSORS
Marshall J. Becker, Ph.D., *University of Pennsylvania*
Glenn W. Samuelson, Ed.D., *University of Maryland*
Margaret C. Yeakel, D.S.W., *Case Western Reserve University*

ASSOCIATE PROFESSORS
Patrick W. Luck, Ph.D., *University of Connecticut*
John A. Main, D.S.W., *University of Pennsylvania*
Martin Murphy, A.M., *University of Michigan*

ASSISTANT PROFESSORS
Jon A. Cowen, A.M., *University of Pennsylvania*
Bonita F. Witthoft, Ph.D., *University of Pennsylvania*

The Department of Anthropology, Sociology, and Social Welfare suspends until further notice the offering of its M.A. degree programs and its M.Ed. degree programs in anthropology and sociology. During the term of this suspension no students will be admitted as degree candidates to the department. The department will on a limited basis, however, offer graduate courses in anthropology, sociology, and social work to graduate students from other areas as well as to advanced undergraduate majors and nonmajors.

COURSE DESCRIPTIONS

Anthropology
Symbol: ANT

500 Strategies and Techniques in Anthropological Research (3) The logic of anthropological research; fundamentals of research design, data collection, evaluation.

512 Ethnographic Studies (3) Intensive survey of a single culture area. Description of the cultural ecology and its significance for the rest of the world. Area for study announced in advance.

515 Problems in Anthropology (3) Major aspects of physical and cultural anthropology. Some background in anthropology recommended.

555 Proseminar in Urban Anthropology (3) Application of techniques of anthropological field investigation to the analysis of urban environments.

580 (also LIN 580) Language and Culture (3) See LIN 580.

595 Seminar in Anthropology (3) Selected problems in anthropology. Subject announced in advance of each semester.

599 Independent Studies in Anthropology (1-3) Research projects, reports, readings in anthropology. PREREQ: approval of instructor and department chairman.

600 Research Report (2)

610 Thesis (3-6)

Sociology

Symbol: SOC

500 Research Design (3) The logic of sociological research; fundamentals of research design, data collection, evaluation.

521 (also CRJ 521) Youth and Delinquency (3) Juvenile delinquency as a form of social deviance; theories of causation and control.

531 Social Problems (3) Social problems in urbanized-industrialized society; their causes and possible corrections.

532 History of Sociological Theory (3) Social thought from the early Greeks to contemporary times. Contributions of outstanding European and American theorists.

533 American Minorities (3) Racial, cultural, and religious minority groups in America today. Prejudice, discrimination, and possible solutions for tensions between dominant and minority groups are examined.

538 (also CRJ 538) Crime and Justice (3) A sociological analysis of criminal law, crime statistics, causes of crime, and the administration of criminal justice.

539 (also CRJ 539) Deviance and Control (3) An advanced analysis of social deviance and control.

540 (also LIN 540) Sociolinguistics (3) See LIN 540.

550 Seminar in Sociology (3) Selected problems in sociology. Subject announced in advance of each semester.

590 Independent Studies in Sociology (1-3) Research projects, reports, readings in sociology. PREREQ: approval of instructor and department chairman.

600 Research Report (2)

610 Thesis (3-6)

Social Work

Symbol: SWO

542 (also CRJ 542) Interviewing and Counseling the Offender I (3) (See CRJ 542).

543 (also CRJ 543) Social Rehabilitation of the Offender (3) Interviewing and counseling skills with the juvenile offender, emphasizing the use of the court and probationary process as dynamics for rehabilitation. PREREQ: SWO 542 (CRJ 542)

Art

Mr. Hoberg, *Chairperson*

ASSOCIATE PROFESSORS

Jack G. Hawthorne, M.F.A., *University of Pennsylvania*
Pamela Hemphill, Ph.D., *University of Pennsylvania*
Perry F. Hoberg, M.A., *University of Delaware*
Victor Lasuchin, M.F.A., *University of Pennsylvania*
Gus V. Sermas, M.F.A., *University of Wisconsin*
Carolyn G. Simmendinger, M.F.A., *Tyler School of Art*
Linwood J. White, M.F.A., *University of Pennsylvania*

ASSISTANT PROFESSORS

Ronald N. Defino, M.F.A., *Tyler School of Art*
William J. Rarick, M.F.A., *Tyler School of Art*
Bernice Shapiro, M.Ed., *Tyler School of Art*

INSTRUCTOR

John Baker, B.A., *West Chester State College*

Course Descriptions

Symbol: ART

516-517 Painting I-II (3) (3) Individual expression in painting. Experimentation is encouraged.

520 Painting: Independent Projects (3) Individualized instruction at advanced level. Development of professional, personal, and imaginative statements leading to formation of student's pictorial identity.

521 Sculpture I (3) Introduction to sculpture via the fundamentals of 3-D design. Use of basic tools, development of skills, techniques, and processes in creating sculpture. Projects in plaster, clay, stone, wood.

522 Sculpture II (3) Advanced problems in sculpture; continuing exploration of form, structure, process. Use and maintenance of tools. Materials; their origins and supply sources. Projects in clay, stone, wood, plastic, plaster, wire, new materials.

525 Multi-Media Workshop in Sculpture III (3) Fabrication methods and techniques, using wood, plastic, various metals.

531 Ceramics I (3) Ceramic techniques and aesthetics of clay, leading toward development of creative expression. Exercises in hand-built and wheel-thrown forms. Formulation of clay bodies, glaze bodies, and calculations; loading and kiln firing techniques. Also, basic exercises for elementary and secondary teaching levels.

532 Ceramics II (3) Further development of expression for those who have mastered basic ceramic processes. Research in clay bodies, glaze chemistry, firing techniques, kiln construction. Creative problems.

533 Ceramics: Studio Problems (3) Individual projects involving the total or specialized areas of the ceramic process. Practical experience through helping to maintain the ceramic complex.

534 Ceramics: Independent Projects (3)

541 Printmaking: Relief, Independent Projects (3) Advanced-level study with individualized instruction. Collagraph, lino-cut, woodcut techniques. Combining various printing processes with relief printmaking.

542 Printmaking: Silk-screen, Independent Projects (3) Advanced-level study with individualized instruction. Technical and aesthetic possibilities including photo-stencil, incorporation of silk-screen with other printmaking processes.

543 Printmaking: Intaglio, Independent Projects (3) Advanced-level study with individualized instruction. Relief etching and basic intaglio techniques for work on metal plates. Drypoint, straight line etch, soft and lift grounds, aquatint, engraving. Combining various printing processes with intaglio printmaking.

544 Printmaking: Lithography, Independent Projects (3) Advanced-level study with individualized instruction. Aluminum plates and stone lithography techniques. Combining various printing processes with lithography.

546 Drawing: Independent Projects (3) Advanced-level study with individualized instruction. Emphasis on professional, personal, and imaginative statements leading to student's iconographic identity.

547 Two-Dimensional Design: Independent Projects (3) Advanced-level study with individualized instruction. Design elements and analytical principles of organization. Emphasis on professional, personal, and creative statements leading to formation of professional employment.

549 Graphic Design: Independent Projects (3) Advanced-level study with individualized instruction. Developing means for solving communication problems of diverse character with emphasis on practical application. Projects are refined into portfolio presentations for professional employment.

551 Art Education in the Elementary School (3) Current trends in art education for the elementary school.

565 Crafts: Independent Projects (3) Projects invoice varied media and their techniques and processes. Exploration of 2-D and 3-D crafts and their application in recreational and elementary school programs.

576 Primitive Art (3) Ritual and myth from prehistory to early Ancient Near East; contemporary primitive cultures; psychological and psychoanalytical interpretations; comparison with phenomenon of primitivistic interests of the West.

580 European and U.S. Art (3) For the student who is deficient in art history and wishes to augment his field (e.g. social studies, literature, philosophy). Analysis of the major forms and styles from Renaissance to present.

581 The Artist and Society (3) Personal statement of the student's commitment to art. The nature of the creative impulse; the necessity to society of creative production.

590 Independent Studies in Art (1-3)

595 Latin-American Art (3) Interpretation of 20th-century environmental architecture and decoration with relationship to cultural development in Latin America.

596 Introduction to Aesthetics (3) Introduction to the aesthetic theories and art forms in the context of social change, philosophy and sciences, creation, and the creative process.

597 History of Aesthetics and Art Criticism (3) Philosophical theories of art production from Ancient Greece through the 19th century. Relationship of aesthetic experience to forms and to technical, psychological, and cultural values.

Biology

Mr. Bernhardt, *Chairperson*
Mrs. Martinez, *Assistant Chairperson*
Dr. Dorchester, *Coordinator for Graduate Studies*

PROFESSORS

Relis B. Brown, Ph.D., *Yale University*
Carmela L. Cinquina, Ph.D., *Rutgers—The State University*
Thomas DeMott, V.M.D., *University of Pennsylvania*
John E. C. Dorchester, Ph.D., *University of Toronto*
William R. Overlease, Ph.D., *Michigan State University*
Ronald F. Romig, Ph.D., *University of Delaware*
Richard I. Woodruff, Ph.D., *University of Pennsylvania*

ASSOCIATE PROFESSORS

Robert W. Bernhardt, M.S., *Syracuse University*
William C. Brown, M.Ed., *Bloomsburg State College*
Georgann Cullen, M.A., *Kent State University*
Margaret Y. Martinez, M.A., *Columbia University*

ASSISTANT PROFESSORS

Marianne K. Eleuterio, Ph.D., *University of Delaware*
Harry G. Jones, M.S., *University of Pennsylvania*
Jack Waber, Ph.D., *University of Hawaii*

The Department of Biology offers two degree programs, one leading to the Master of Arts in biology and the other to the Master of Education in biology.

Admission to the Programs

Applicants for either program must meet the general requirements for admission to degree study at West Chester and, in addition, submit scores for the Graduate Record Examination (verbal, quantitative, and advanced biology).

Admission to the M.A. Program

Applicants must present a minimum of two semesters of general college chemistry, one semester of organic chemistry, one semester of mathematics, and at least 24 semester hours of biological science.

Admission to the M.Ed. Program

Applicants must present a minimum of two semesters of general college chemistry, one semester of organic chemistry, and at least 18 semester hours of biological science.

Degree Candidacy

Students who intend to obtain a master's degree in biology must apply for degree candidacy by the time they have completed 15 hours of graduate credit in the Department of Biology. The application forms are obtained from the Graduate Office. In order to qualify for admission to candidacy the student must:

1. Have completed a minimum of 12 hours of graduate-level courses in biology with an average of B (3.0) or better.
2. Have submitted Graduate Record Examination scores for verbal, quantitative, and advanced tests.
3. Have performed satisfactorily on the departmental qualifying examination, which is administered the third Saturday of March and the third Saturday of October. Students should notify the department graduate coordinator in writing of their intention to take the examination.
4. Have removed any conditions under which the student was originally admitted to graduate study.

REQUIREMENTS FOR THE M.A. DEGREE IN BIOLOGY

30 Semester Hours

The candidate for the M.A. in biology must complete 30 semester hours of graduate work, of which at least 24 credits must be in biology. Six of these credit hours must be either in a thesis or a seminar program as outlined below. Six credit hours may be taken in allied sciences, approved by the department. In addition the candidate must perform successfully on an oral defense of thesis, or on the oral comprehensive examination.

A. Thesis (BIO 610)

The thesis should be based on independent laboratory or field observations and should constitute a contribution to existing knowledge. Although publication is not a requirement, the thesis should be in a format acceptable to any standard journal in the field. The candidate will be expected to defend the thesis during an oral examination.

B. Seminars in Biology

The candidate will participate in three seminars chosen from the following seminars: BIO 520—550—560—570—590. Seminars selected are subject to the approval of the faculty adviser or instructor. The content of the seminars will figure prominently in the final oral comprehensive examination.

REQUIREMENTS FOR THE M.Ed. DEGREE IN BIOLOGY

34 Semester Hours

The candidate for the M.Ed. must complete 34 semester hours of graduate work, and of these, 10-12 hours must be taken in professional education courses in accordance with the requirements of the School of Education. (See page 129.) In the area of biology, BIO 500 is required from all M.Ed. candidates. Of the remaining 18-20 semester hours, all must be taken in biology or—under advisement—three of these hours may be taken in an allied science. The final comprehensive oral examination must be taken any time after the completion of 28 semester hours. Students may elect to be examined in the subject matter of their courses or may elect to present a seminar and be examined in the subject matter of the seminar and peripheral areas of knowledge.

Finally the student fulfills an elective requirement of from 0-4 semester hours in either professional education or academic course work.

COURSE DESCRIPTIONS

Symbol: BIO

500 Methods and Materials in Biological Research (2) Literature searching in biology; preparations of scientific reports; experimental design. Offered in summer session.

501 Modern Techniques of Teaching Biology (3) Contemporary methods in biology teaching including laboratory preparations and presentations. Not offered in 1977-78.

503 Mammalian Physiology (3) Fundamental physiological processes in mammals. PREREQ: college biology. Offered in summer session.

505 Field Ecology and Natural History (3) Identification of natural forms in local habitats. A course for endorsement of teachers in outdoor education. Not applicable to a master's degree in biology. Not offered in 1977-78.

510 History of Biology (3) Development of biology from the earliest records. PREREQ: general zoology, general botany. Offered in summer session.

512 The Living Forest (1) An introduction to the forest as an ecosystem. Not counted toward a biology major. Offered in summer session.

515 Common Trees of Chester County (1) Survey of common native (and some ornamental) trees of Chester County, including identification and relationships of species to habitat. Not counted toward a biology major. Offered in summer session.

516 Summer Wild Flowers (1) Survey of common summer wild flowers (and some weeds), including identification and relationship of species to habitat. Not counted toward a biology major. Offered in summer session.

517 Summer Birds (1) Location, observation, and identification of summer birds. Not counted toward a biology major. Offered in summer session.

520 Seminar in Cellular Biology (2) Oral and written reports on topics drawn from such areas as cellular physiology, cytology, genetics, histology, and microbiology. PREREQ: permission of department. Not offered 1977.

528 Animal Histology (3) Structure and function of animal tissues and organs. PREREQ: college biology or zoology. Offered in summer session.

530 Genetic Theory (3) Structure and function of nucleic acids, genetic regulatory mechanisms, repair mechanism, mutagenesis, natural and engineered DNA recombination. Emphasis on current literature. PREREQ: college biology, genetics, and organic chemistry. Offered in fall. Not offered in 1977-78.

539 Human Heredity (3) The innate qualities of human beings and the genetic basis for these qualities. PREREQ: general genetics or permission of instructor. Offered in fall. Not offered in 1977-78.

543 Experimental Embryology (3) A laboratory course introducing the student to experimental embryology. PREREQ: embryology and organic chemistry or permission of instructor. Offered in spring every other year.

544 Mycology (3) An introductory course in mycology including a general study of the biology of fungi and a survey of the field of medical mycology. PREREQ: BIO 110 plus 4 hours of biology.

547 Growth and Development (3) Discussion course dealing with current topics in the field of developmental biology. PREREQ: college biology or zoology. Genetics and embryology recommended. Offered in spring every other year. Not offered in 1977-78.

549 Developmental Anatomy (3) Anatomy of human reproductive systems and fundamentals of human development. PREREQ: college biology or zoology. Not offered in 1977-78.

550 Seminar in Organismic Biology (3) Oral and written reports on topics drawn from such areas as development, morphology, physiology, systematics, and particular groups of organisms. PREREQ: permission of department.

552 Comparative Parasitology (2) Morphology and life cycles of the important parasites of man and animals; epidemiology, pathogenesis, and methods of treatment and control. Two hours lecture and three hours lab. PREREQ: college biology or zoology. Offered in spring.

554 Mycology (3) An introductory course including a general study of the biology of fungi and a survey of the field of medical mycology. PREREQ: BIO 110 plus 4 hrs. of biology.

559 Advanced Human Anatomy (3) Regional studies in the structure of man. PREREQ: college biology. Not offered in 1977-78.

560 Seminar in Molecular Biology (2) Oral and written reports on topics drawn from such areas as biochemistry, biophysics, and microbiology. PREREQ: permission of department.

561 Biochemistry I (3) Chemistry of carbohydrates, fats, proteins, and phosphorus compounds. PREREQ: inorganic chemistry, one semester of organic chemistry. Offered in fall.

562 Biochemistry II (3) Continuation of BIO 561; bioenergetics; enzymology; metabolism of carbohydrates, fats, proteins. PREREQ: BIO 561 or equivalent. Offered in spring.

566 Physiology of Plants (3) Plant-cell physiology including respiration, photosythesis, enzyme catalysis, auxims, membrane phenomena PREREQ: college botany, organic chemistry. Offered in summer session.

567 Endocrinology (3) Anatomy and physiology of the ductless glands and the role of hormones in regulation and coordination of body processes. PREREQ: college biology and organic chemistry. Offered in summer session.

569 Nutrition (3) Studies in nutrition as applied to the health and habits of man. PREREQ: college courses in biology and chemistry. Not offered in 1977-78.

570 Seminar in Populational Biology (2) Oral and written reports on topics drawn from such areas as biogeography, ecology, evolution, and natural history. PREREQ: permission of department.

572 Applied Ecology (3) Principles of ecology applied in the practice of resource management: forestry, wildlife management, park management, and agriculture. PREREQ: BIO 504 or equivalent. Not offered in 1977-78.

575 Limnology (3) Physical, chemical, and geological features of the freshwater algae. PREREQ: college botany, general ecology. Offered in spring.

578 Freshwater Invertebrates (3) Morphology, taxonomy, and bionomics of freshwater invertebrates. PREREQ: college biology. Offered in summer session.

579 Human Ecology (3) The urban ecosystem, approached through study of the major biotic and abiotic components of a local urban community. PREREQ: college biology, ecology, or permission of instructor. Offered in fall.

580 Experimental Biology (3) Experimental approaches to biology including measurement, instrumentation, and experimental design. PREREQ: two years of college biology. Not offered in 1977-78.

581 Microtechnique Laboratory (2) Introduction to histological and histochemical techniques. PREREQ: animal histology or permission of instructor. Not offered in 1977-78.

584 Epidemiology (3) A general study of the epidemiology of both infectious and non-infectious diseases, including industrial and environmentally related health problems. Methods of interviewing and data collecting are also included. PREREQ: BIO 104 or BIO 364.

585 Systematic Botany (3) Principles of taxonomy and biosystematics. Selected plant families from tropical and temperate zones. Each student develops proficiency in the use of modern flora and knowledge of the common species of the spring flora of Chester County. PREREQ: college botany or permission of instructor. Not offered in 1977-78.

587 Systematic Zoology (3) Principles and procedures governing the classification of animals. PREREQ: college biology. Not offered in 1977-78.

590 Seminar in Biological Principles (2) Discussion and written reports on topics of current interest in biology. PREREQ: permission of instructor.

591 Independent Study in Biology I (1-3) Individual research under the guidance of a faculty member. PREREQ: permission of instructor.

592 Independent Study in Biology II (1-3) Individual research under the guidance of a faculty member. PREREQ: permission of instructor.

593 Independent Study in Biology III (1-3) Individual research under the guidance of a faculty member. PREREQ: permission of instructor.

600 Research Report (1-3)

610 Thesis (6)

Sci 522 Philosophy of Science (see Phi 522)

See also Marine Science

Chemistry

Dr. Foery, *Chairperson*
Dr. Bravo, *Coordinator for Graduate Studies*

PROFESSORS
Justo Bravo, Ph.D., *University of Kansas*
Marc L. Durand, Ph.D., *University of New Hampshire*
Robert F. Foery, Ph.D., *University of Iowa*
Robert W. Medeiros, Ph.D., *University of Delaware*
Francis J. Reynolds, Ph.D., *University of Pennsylvania*
Philip B. Rudnick, Ph.D., *Rutgers—The State University*
William Torop, Ed.D., *University of Pennsylvania*

ASSOCIATE PROFESSORS

John Mangravite, Ph.D., *University of New Hampshire*
Ardis M. Williams, A.M., *Vassar College*

ASSISTANT PROFESSORS

Helen R. Eichelberger, Ph.D., *University of New Orleans*
Andrew Goudy, Ph.D., *University of Pittsburgh*
Virgil E. Magnuson, Ph.D., *University of New Hampshire*
Philip Witonsky, Ph.D., *University of Minnesota*

The Department of Chemistry offers a program leading to the Master of Science degree in chemistry and cooperates with the Departments of Earth Sciences and Physics in offering a program leading to the Master of Arts in physical science. *See Physical Science Program.*

MASTER OF SCIENCE IN CHEMISTRY

Admission Requirements

In addition to meeting the general requirements for a degree program at West Chester, applicants must present an undergraduate background including mathematics through calculus, one semester of analytical chemistry, and full-year courses in organic chemistry and physical chemistry.

Degree Requirements

1. Before admission to degree candidacy, each student is required to take four out of five qualifying examinations in the major areas of chemistry (inorganic, analytical, physical, and biochemistry). The four areas are to be selected by the student. At least three of these examinations must be passed. If necessary, they may be retaken once. The student may be required to enroll in appropriate undergraduate courses for no credit in order to prepare for a re-examination. These examinations must be passed before admission to degree candidacy, i.e., prior to the attainment of 15 graduate credits.

2. At the discretion of the department chairperson, Graduate Record Examination scores may be required for purposes of evaluation and guidance.

3. A reading proficiency is required in any one of the following modern languages: German, French, or Russian. The reading test is administered by the Department of Foreign Languages. In place of the modern-language proficiency, a demonstrated proficiency in a computer language (FORTRAN, for example) may be substituted.*

4. The candidate must perform successfully on an oral examination which is required for all options. The oral examination will include general chemistry knowledge but will place emphasis on the area represented by independent study or the research report. The members of the examination committee include the research supervisor, the departmental graduate coordinator, and one other professor.

PROGRAM FOR THE M.S. IN CHEMISTRY

30, 33 or 36 Semester Hours

The M.S. in chemistry program consists of a required core of 15 semester hours and a chemistry elective area for which there are three options. All students must complete the core, composed of CHE 511—531—545 and any two of the Topics courses CHE 515—525—533—542—551—575).

Option A (30 semester hours)
This is the thesis program. Beyond the core the candidate takes Independent Studies/Thesis (CHE 610) and 9 semester hours of electives.

Option B (33 semester hours)
Beyond the core this option requires Independent Study in Chemistry/ Research Report (CHE 590) for 6 credits and 12 semester hours of electives.

Option C (36 semester hours)
Under this plan the student completes core requirements and an elective area of 21 semester hours which must include 3 credits in library research and report (CHE 590).

Under all options the elective area is developed under advisement from chemistry offerings but may include 3 semester hours from another science area or from mathematical sciences.* Until admitted to degree candidacy, students may not undertake independent study.

*A computer science course taken to satisfy the foreign language requirements will not be counted as an elective toward the degree

COURSE DESCRIPTIONS

Symbol: CHE unless otherwise shown. CHL: Laboratory

501 History and Literature of Chemistry (2) Development of chemical theories, rise of the experimental method; impact of major chemical discoveries on modern man. Use of published materials in chemical work. Library techniques; methods of information retrieval.

502 Modern Trends in Teaching Chemistry (2) Introduction to current research in chemical education. New curricula and tools for teaching including audio-tutorial and programmed instruction.

503 Chemistry of the Environment (3) The chemistry of the atmosphere, hydrosphere, and biosphere. Man's impact on these areas. Not for M.S. in chemistry.

508 Industrial Pollution (3) Applications of elementary chemical engineering to the industrial complexities of the environmental processes. Emphasis on unit operations and unit processes applicable to pollution control and abatement.

511 Advanced Inorganic Chemistry I (3) Structure and properties of the elements and their compounds from a theoretical point of view; horizontal, vertical, and diagonal relationships in the periodic table.

512 Advanced Inorganic Chemistry II (3) Continuation of CHE 511 with emphasis on the preparation and properties of the lanthanides, actinides, and other transition elements. PREREQ: CHE 511.

513 Principles of Geochemistry (also ESS 513) (3) Migration and distribution of the chemical elements within the earth; chemistry of the lithosphere, atmosphere, hydrosphere, and biosphere; chemical changes throughout earth history; the geochemical cycle.

515 Topics in Inorganic Chemistry (3) Topics of current interest in inorganic chemistry. Topic to be announced prior to registration.

516 Inorganic Preparations (3) A laboratory course in advanced techniques for the synthesis of inorganic compounds.

521 Advanced Analytical Chemistry (3) Analytical methods and techniques; theory and application of chemical instrumentation.

523 Laboratory Analysis of Eco Systems (3) Lecture and laboratory experience in sampling techniques and methods of analysis currently employed in pollution control and abatement.

525 Topics in Analytical Chemistry (3) In-depth examination of current topics in instrumental or wet chemical analysis. Special emphasis on state-of-the-art development and applications.

530 Organic and Biological Chemistry for Teachers (3) A survey course for teachers with no background in organic chemistry. PREREQ: 1 year of college chemistry.

CHL 530 Basic Experiments in Organic and Biological Chemistry (2) A one-semester laboratory course for CHE 530 in fundamentals of organic chemistry. Basic laboratory procedures are taught and used for a number of organic syntheses.

531 Organic Reaction Mechanisms (3) Theoretical treatment of selected organic reactions. Emphasis on bonding theory, structural relationship, equilibria, and free-energy relationships.

532 Synthetic Organic Chemistry (3) Topics of current interest in organic chemistry. Topic announced prior to registration.

533 Topics in Organic Chemistry (3) Topics of current interest in organic chemistry. Topic announced prior to registration.

535 Qualitative Organic Analysis (4) Identification of pure organic compounds and mixtures of organic compounds using classical and modern instrumental techniques. Laboratory included.

536 Polymer Chemistry (3) Polymerization kinetics, rheology of polymer melts, crystallization parameters, and monomer reactivity in copolymerization.

540 Advanced Physical Chemistry (3) Basic quantum chemistry, including the hydrogen-atom problem, chemical bonding, spectroscopic concepts, and group theory.

541 Physical Chemistry for Teachers (3) For chemistry teachers with no background in physical chemistry. Introduction to thermodynamics, kinetics and quantum chemistry. PREREQ: integral calculus, general chemistry, general physics.

CHL 541 Basic Experimental Physical Chemistry (2) A one-semester series of experiments for CHE 541, illustrating principles of physical chemistry. Atomic structure, thermodynamics, kinetics, colligative properties, molecular properties. Some apparatus design and use of standard instrumental methods.

542 Topics in Physical Chemistry (3) Topics of current interest in physical chemistry. Topic announced prior to registration.

545 Chemical Thermodynamics (3) Laws and functions of thermodynamics and their applications: introduction to statistical thermodynamics.

551 Chemistry of Coordination Compounds (3) Principles of complex formation; application of the crystal theory, various complexing agents, and chemical implications of coordinated compounds. PREREQ: CHE 511.

561 Nuclear and Radiochemistry (3) Nuclear reactions, emissions of various particles, radio chemical applications.

563 Electrochemistry (3) Principles of electrochemical systems and galvanic cells; electrolytic applications in instrumentation and research. PREREQ: CHE 511.

575 Topics in Biochemistry (3) Topics of current interest in biochemistry. Topic announced prior to registration.

579 Chemical Toxicology (4) A one-semester course in the basic principles of toxicological analysis. Special emphasis will be placed on documentation, sampling, and verification of laboratory materials and results. The environmental and physiological aspects of chemical toxicity will be explored.

580 Workshop for Secondary School Chemistry Teachers (3) Topic announced when offered.

581 Clinical Chemistry (3) Analysis of biological fluids. Clinical significance of enzyme, electrolyte, protein, and carbohydrate analysis. Requires permission of instructor or undergraduate preparation in organic chemistry and quantitative analysis. PREREQ: OR CONCURRENT: CHE 571 (Fundamentals of Biochemistry). CONCURRENT: CHL 581.

CHL 581 Clinical Chemistry Laboratory (2) Lab for CHE 581. Practical experience in analysis of biological fluids for diagnostic parameters. Nature of biological sampling, sample preservation, methodology, statistics, quality control. PREREQ: CHL 231 and CHL 321 or equivalents.

585 Theory and Practice of Spectrophotometry (4) Lecture and laboratory course with emphasis on research uses of spectrophotometry. Theoretical background and laboratory techniques for understanding and carrying out advanced spectroscopic studies.

590 Independent Stuides in Chemistry (1-6) An original investigation in a specific area under a staff member.

591 Seminar (1-2) Topics of current interest in chemistry.

610 Research and Thesis (6)

Sci 522 Philosophy of Science Not for M.S. in chemistry.

Any of the following dual level courses (but not more than 6 semester hours of credit) may be taken for graduate credit toward the degree:

CHE 504 Foundations of Nutrition (3)
CHE 524 Instrumental Methods of Analysis (2)
CHL 524 Instrumental Analysis Laboratory (3)
CHE 571 Fundamentals of Biochemistry (3)
CHL 571 Experimental Biochemistry (2)

Counselor Education

Dr. Smith, *Chairperson*

PROFESSOR

Edward D. Smith, Ed.D., *Pennsylvania State University*

ASSOCIATE PROFESSORS

Ronald L. Gottshall, M.A., *Michigan State University*
Saul H. Greenberg, J.D., *University of Batlimore*
William J. Rahn, M.Ed., *Temple University*
Julian M. Swiren, Ed.D., *Pennsylvania State University*

The Department of Counselor Education offers two degree programs. The first is a degree-certification program which leads to the Master of Education and the Educational Specialist I Certificate for elementary school counselors and secondary school counselors.

The second leads to the Master of Science degree for persons interested in counseling in higher education.

A handbook describing both programs in greater detail is available from the counselor education office.

Admission to The Program

Applicants must possess a baccalaureate degree from an approved institution and present an undergraduate overall average of at least 2.5. They must also have achieved an average of 2.75 in at least nine credits of guidance-related courses in areas of education, psychology, and sociology.

Additional criteria are satisfactory scores on the Miller Analogies Test and evidence of personal and professional qualities indicating a potential for success in the counselor education programs.

Degree Requirements

Upon meeting admission criteria, students are accepted for Competency Area I, and during this phase, are evaluated for academic achievement and interpersonal relations.

Upon successful completion of Competency Area I and departmental recommendations, students become degree candidates for the remainder of the program, which encompasses advanced work and field experiences. Upon completion of the prescribed work and advisor's recommendation, candidates must undertake a comprehensive examination. The degree being pursued will be granted only when the student has met the standards of the Counselor Education Department.

Certification

In order to obtain the Educational Specialist I Certificate, the student must successfully complete the required practicum in an approved secondary or elementary school. This course provides opportunity for the student to work closely with a professional counselor in a public school under supervision of the director of the practicum at West Chester State College. The

certificate is issued on the basis of the program approval status of the counselor education program at the college as granted by the Pennsylvania Department of Education.

M.Ed. IN ELEMENTARY SCHOOL COUNSELING

36-42 Semester Hours

Competency Area I: EDC 503, 567, 571, EDF 502	12 s.h.
Competency Area II: EDC 520, 540, 556, 572, 574	15 s.h.
Competency Area III: EDC 585, 590	6 s.h.
Complementary coursework	3-9 s.h.

M.Ed. IN SECONDARY SCHOOL COUNSELING

36-42 Semester Hours

Competency Area I: EDC 503, 567, 571, EDF 502	12 s.h.
Competency Area II EDC 520, 540, 556, 573, 575	15 s.h.
Competency Area III: EDC 585, 591	6 s.h.
Complementary coursework	9-15 s.h.

MASTER OF SCIENCE IN HIGHER EDUCATION COUNSELING

36-42 Semester Hours

Competency Area I: EDF 502	3 s.h.
Competency Area II: EDC 530, 531, 578, 592, 593	15 s.h.
Competency Area III: PSY 505, 506, 509, 512, 524, 529, 544, 549, 550	9 s.h.
Complementary coursework	9-15 s.h.

COURSE DESCRIPTIONS

Symbol: EDC

503 Introduction to Guidance Services (3) Historical development, philosophical foundations and determinants of guidance services in contemporary elementary and secondary education. Special services, testing, group and individual counseling, other elements. Guidance as a profession; ethics; current developments and trends.

520 Counseling for Human Differences (3) Examination of differences manifested by individuals. The purpose of the examination is to prepare counselors for designing counseling strategies appropriate to the uniqueness of the client.

530 The College Student (3) In the face of increasing demands for relevance, flexibility, and vitality in the college community, workers in higher education need to know contemporary students. Hence this exploration of several aspects of the life and work of today's young adults.

531 Introduction to Counseling in Higher Education (3) Introduction to the type of counseling services which are provided in higher education and to the settings in which these take place.

540 Assessment Methods in Guidance (3) Emphasis is on the test and non-test assessment of intelligence, achievement, special abilities, aptitudes including concepts such as reliability, validity, standardization. Elementary and secondary applications stressed.

556 Career Development Theories and Practices (3) Theories and techniques related to career development in children, adolescents, and adults for both elementary and secondary counselors. Collection, use, and dissemination of occupational, educational, and social information stressed.

567 Group Dynamics (3) Principles from the behavioral sciences, applied to understanding of small-group behavior as found in typical classrooms and group guidance settings. Developing competencies in group leadership. Translating educational experiences into positive decisions about self and environment.

568 The Professional Counselor in the Elementary School (3) Role, responsibilities, and practices of the contemporary elementary guidance counselor. Development of the guidance program; relationship to curricula; position of the counselor with respect to the administration, parents, children, and teachers.

569 The Professional Counselor in the Secondary School (3) Role, responsibilities, and practices of the contemporary secondary guidance counselor. Referral resources, parental conference techniques relationship with administration and staff, curricula; administrative aspects of the guidance program.

571 Theories of Counseling (3) The basic theories of counseling, with emphasis on historical and philosophical origins. Historical antecedents of each theory, and evaluation of the potential of each theory as a viable approach for school counselors.

572 Counseling and Consultative Techniques in the Elementary School (3) Practical application of the basic theories of counseling. Application of counseling and consultative techniques in simulated settings within the elementary school framework. Counselor relationships with pupils, teachers, administrators, pupil personnel staff. Community resources.

573 Counseling and Consultative Techniques in the Secondary School (3) Practical application of the basic theories of counseling in the secondary school setting. Application of counseling and consultative techniques in simulated secondary school settings, with emphasis on the pupil, teacher, administration, parents, staff, and community resources.

574 Group Procedures in the Elementary School (3) Emphasis is on mastering the basic theories and techniques appropriate to group procedures in the elementary school. Exposure to planning, implementing, and evaluating group activities.

575 Group Procedures in the Secondary School (3) Mastery of theories and techniques basic to planning and implementing group activities in the secondary school. Evaluation of group activities is also stressed.

578 Counseling Techniques with Adults (3) a pre-practicum experience in counseling adults. Application of principles and practices; preparation and techniques for group counseling.

585 Contemporary Issues and Trends in Guidance (3) Contemporary issues and current trends in school guidance. The student evaluates basic positions and integrates them into the prospective role of a school counselor.

590 Practicum in Elementary Guidance and Counseling (3) Supervised practice guidance and counseling in an approved elementary school. In addition to work under the direction of a professional counselor in the school setting, the student meets on campus with the practicum supervisor for intensive seminar activities.

591 Practicum in Secondary Guidance and Counseling (3) Supervised practice guidance and counseling in an approved secondary school. The student works under the direction of a professional counselor in the school setting, and meets on campus with the practicum supervisor for intensive seminar activities.

592 Practicum in Higher Education Counseling I (3) Supervised counseling experiences in multiple settings within the higher education system. A related on-campus seminar is included.

593 Practicum in Higher Education Counseling II (3) Intensive supervised counseling experience in an approved higher education setting. The practicum consists of an on- and off-campus experience.

599 Independent Study (1-3) Independent research and study under the direction of a faculty member. PREREQ: permission of department chairperson and instructor.

Criminal Justice

Dr. Seidel, *Chairperson*

PROFESSORS

Thomas J. Francella, J. D., *University of Baltimore*

ASSOCIATE PROFESSORS
Luther R. Barth, M.Ed., *Loyola University*

ASSISTANT PROFESSORS
William B. Anderson, Jr., B.A., *Pennsylvania State University*
John J. Humanick, Ed.D., *Heed University (part-time)*
Ian Lennox, M.A., *University of Pennsylvania (part-time)*
Marian MacIntyre, J.D., *Dickinson School of Law (part-time)*
Thomas A. Pitt, Jr., J.D., *Villanova School of Law (part-time)*
Janet C. Seidel, Ed.D., *Temple University*
William D. Tate, Ph.D., *University of California (part-time)*
Clayton J. Undercoffler, III., J.D., *Villanova University (part-time)*

The Department of Criminal Justice offers a program leading to Master's of Science in Criminal Justice with a concentration in Law Enforcement or Treatment of Offenders.

MASTERS OF SCIENCE IN CRIMINAL JUSTICE

Admission requirements: All candidates must meet the general requirements for admission to a degree program at West Chester State College. Applicants must present an undergraduate background in Criminal Justice or a relevant field or be prepared to take additional work at the undergraduate level. A resume of work experience related to criminal justice and a description of the anticipated goals of the student in the field is also required.

Degree Requirements:

1. An acceptable score on the Miller Analogies Test taken at or before the satisfactory completion of six semester hours of CRJ course work.
2. The student must arrange for an interview with two members of the department faculty before provisional or full-degree status in the graduate program will be granted.
3. The students must apply to be admitted to candidacy after the completion of twelve to fifteen credits of required course work.
4. Each student must pass a comprehensive examination after the completion of 30 semester hours of course work. The student must file with the chairperson, a written request to take the examination no later than two weeks prior to the date of the examination. A student who fails the examination twice must obtain approval of the chairperson to take it a third and final time.
5. Completion of all course requirements for the degree.

MASTER OF SCIENCE IN CRIMINAL JUSTICE

36 Semester Hours

1. Core Courses — 12 s.h.
   CRJ 505, 506, 507, 508

2. Concentration: Area I: Law Enforcement
   CRJ 511, 513, 515(01), 544, 561 — 15 s.h.
   or Area II: Treatment of Offenders
   CRJ 515 (02), 520, 521, 542, 543 — 15 s.h.
3. Electives* — 9 s.h.
   CRJ 509, 516, 538, 539, 540, 560, 562, 563, 570, 573, 574, 575

*Electives may be selected from other disciplines with the approval of the student's advisor.

COURSE DESCRIPTIONS

Symbol: CRJ

505 Resolutions of Internal Personal Conflicts (3) Survey of current methods for dissolving and resolving personal conflicts: transactional analysis, transcendental meditation, others. Introduction to theory, demonstration, application.

506 Management of the Criminal Justice Systems (3) Advanced management theory as applied to criminal justice agencies with emphasis on management functions, budget requirements, and evaluation procedures.

507 Conflict in the Criminal Justice System (3) Conflicting views of participants in the criminal justice system from offense to release. Analysis of the distinctive individual statements and views of victims, investigators, prosecution and defense counsel, judges, penologists, religio-psychiatric figures, convicted persons. Public attitudes.

508 Research Design and Analysis (also GEO 508) (3) (See GEO 508).

509 Analysis of the Ethnic Minority Offender (3) Study and evaluation of the socio-psychological and cultural aspects of the minority offender. Special emphasis will be given to crime prevention, community values, and mores, law enforcement relationships, adjudication relationships and correctional relationships. (Cheyney College)

511 Police Problems and Practices (3) Identifies and analyzes the major problems faced by law enforcement agencies in the prevention, detection, and solution of those acts defined as "criminal violations." Reviews the practices which have come into use as tools in the resolution of these problems.

513 Problems of the Prosecution (3) A graduate seminar designed for students who are employed in the field or who are seriously interested in such work. An examination of the U.S. criminal justice system from the perspective of the office of the criminal prosecutor. The creative opportunities especially afforded the prosecutor are emphasized.

515 Seminar (3) Each graduate student will be expected to participate in a seminar in the area of concentration.
(01) Law Enforcement—This course will explore the issues and problems in law enforcement including regionalization, absenteeism, the affects of politics, women in law enforcement, etc.
(02) Treatment of Offenders—This course will explore the issues and problems in treatment areas including recidivism, incarceration and its alternatives, types of treatment, sentencing, etc.

516 Urbanization and Criminal Behavior (3) A critical examination of the modernization and urbanization processes and their relation to criminal conduct. Focus on the dynamics and differential effects of these processes on ethnic and cultural groups in today's urban American society. (Cheyney College)

520 Legal Rights and Responsibilities (3) A basic introduction to an emerging field of law—the rights of prisoners.

521 Youth and Delinquency (also SOC 521). (3) See SOC 521.

538 Crime and Justice (also SOC 538) (3) See SOC 538.

539 Deviance and Control (also SOC 539) See SOC 539.

540 Foundations of the Criminal Justice System (3) To emphasize the professionalism of the various criminal justice personnel, the philosophical and historical development from primitive periods to present, to acquaint the student with the various criminal justice systems and the career opportunities by an introductory overview.

542 Interviewing and Counseling the Offender (also SWO 542) (3) Techniques of counseling applicable to Law Enforcement and Corrections officers. Areas of study include the initial interview, interrogation, handling the informer, manipulative behavior of offenders, and exit interviews. Role playing and sociodrama are used.

543 Social Rehabilitation of the Offender (also SWO 543) (3) See SWO 543.

CRJ 544 American Public Policy (also PSC 544) (3) See PSC 544.

560 Notable Criminal Cases (3) Selected factual accounts of criminality and criminal behavior over the past 75 years are analyzed. Selection is based on significance and instructional quality of the account and, while primarily devoted to the United States, cases include one classic misfunction of this century. Course is designed, through reading and class analysis, to illuminate a wide spectrum of specific criminal conduct and the related investigative and judicial response.

561 Major Case Investigation (3) The course is based on a model major case constructed for re-enactment including investigative procedures relative to victims, participants, witnesses, spectators, news media, law enforcement employees, and the miscellany of peripheral persons significant in a major crime. It will also cover the interview reports, preservation and collection of evidence, scientific and laboratory examinations, and the varied necessary paperwork for an actual major crime. It will emphasize the management skills required for the field commander to insure control over the investigation. Guest speakers will discuss major crimes from their personal viewpoints.

562 Systematic Criminality (3) The course embraces these criminal behavior patterns referred to as "consumer fraud . . . violations of trust . . . white collar crime . . . organized crime . . . official corruption" as opposed to violent or street crime. Includes criminal conduct in commerce, industry, banking, news media, government, and academia. Discusses methods and techniques of identifying these covert acts and the collection of evidence in this pervasive problem area.

563 International Criminality (3) The course provides a cross-cultural approach to crime and criminal justice as found in selected foreign countries. The material presented will be contrasted to the United States experience.

570 Human Communication (3) An intensive study of communication between component parts of the Criminal Justice System (courts/corrections/law/enforcement/society). There will be an opportunity to learn observational skills, the implication of body language, listening techniques, and the traditional biases which have brought the various areas into conflict.

573 Survey of the Correctional Field (3) The study of the federal, state, and county correctional systems including historical perspectives, theoretical assumptions, and major changes recommended by the National Advisory Commission and the President's Task Force. Opportunities will be provided to visit institutions and agencies and participate in discussions with administrative personnel within the system.

574 Instruments in the Detection of Deception (3) A survey of polygraph development and the use from the early 1900's to the present. Covers current legislation regulating polygraph use and measures for self-regulation adopted by local, state and federal agencies. Illustrates proper and improper use of the polygraph through case examples. Demonstrates polygraph technique in a classroom/laboratory setting. Other instruments measuring voice stress are described, as are the legal problems connected with their use.

575 Official Corruption (3) The course analyzes the usually non-violent criminal conduct variously described as white collar crime, official corruption, systematic crime, or violations of trust, that is characterized by calculation, deceit, and personal enrichment. The influence of organized crime is explored. Examples from industry and government (including the criminal justice system) are included.

Earth Sciences

Dr. Reed, *Chairperson*

PROFESSORS

Seymour S. Greenberg, Ph.D., *Indiana University*
George F. Reed, Ed.D., *University of Pennsylvania*
Russell K. Rickert, Ed.D., *New York University*
Paul R. Widick, Ed.D., *Temple University*

ASSOCIATE PROFESSORS

Louis A. Casciato, M.S., *Villanova University*
John E. Ehleiter, M.A., *Wesleyan University*
Hubert E. Harber, M.A.T., *Brown University*
Allen H. Johnson, Ph.D., *Case Western Reserve University*

The Department of Earth Sciences, in cooperation with the Departments of Chemistry and Physics, offers a program leading to the Master of Arts degree in physical science. *See Physical Science Program.*

COURSE DESCRIPTIONS

Symbol: ESS

500 Modern Trends in Science Education (3) Introduction to current research in science education; a critical review of the literature.

501 Earth Sciences in the Secondary School (3) Recent curricula, teaching materials, and techniques for the secondary school.

505 Geology of the Solar System (3) The geology, origin, and properties of planets, comets, asteriods, moons, and meteorites. PREREQ: one introductory course in astronomy and one in geology.

510 Principles of Physical Geology (3) Composition of the earth (minerals and rocks) and earth processes (weathering, erosion, metamorphism, volcanism, diastrophism).

511 Geophysics (3) Methods and techniques of physics applied to interpreting the internal structure and composition of the earth. PREREQ: physical geology.

512 Historical Geology (3) Geologic history of the earth and the evidence for this history. Examination of fossils and geologic maps.

513 Principles of Geochemistry (also Che 513) (3) Migration and distribution of the chemical elements within the earth; chemistry of the lithosphere, hydrosphere, and biosphere; chemical changes throughout earth history; the geochemical cycle.

514 Mineralogy (3) Properties, identification, occurrence, and crystallography of the more important minerals. Fundamentals of mineral composition and structure.

515 Introduction to Rocks (3) Origin, classification, and identification of rocks. Field and hand specimen examination.

516 Structural Geology (3) Sequential development of the structural features of the arts; the forces involved. PREREQ: physical and historical geology.

517 Stratigraphy (3) Development of the relative geologic time scale; physical, chemical, and biologic environments at the time of the formation of stratified rock. PREREQ: physical and historical geology.

518 Sedimentation (3) Sedimentary rocks: classification, erosion, transportation, and deposition of stratified rock; paleo-environmental interpretations. PREREQ: physical and historical geology.

519 Field Geology (1-3) Practical experience in techniques and tools of the field geologist. PREREQ: an introductory geology course.

520 Geology of the National Parks (4) The study of selected geologic areas by means of observing the exposed geology in a number of national parks located in the region. On successive years different areas will be studied. Prerequisites: Physical Geology, Historical Geology and approval of instructor.

521 Geology in the Elementary School (3) Primarily for elementary school teachers. Fundamental principles for the origin, classification, and identification of rocks, minerals, and fossils.

523 General Geologic Field Studies of Southeastern Pennsylvania (3) Occurrence, relationships, and geologic history of the rocks, minerals, and soils of this area, studied at representative locations.

524 History of Geology (1) Outstanding individuals and their contributions to geology.

525 Glacial Geology (1) Causes, regimen, distribution, and effects of glaciers.

526 Geology of Petroleum (1-3) Origin, reservoir conditions, migration, accumulation, and geographic and geologic distribution of petroleum.

530 Principles of Oceanography (3) Geology of the ocean floor, water movements, chemical characteristics of sea water, vertical and horizontal distribution of plants and animals. Brief history of oceanography.

533 Introduction to Fossils (3) Identification and study of common fossils in order to understand their life processes and geologic significance.

540 Introduction to Meteorology (3) Composition and properties of the atmosphere and principles that influence weather conditions.

550 General Astronomy (3) Motions of bodies in the solar system; astronomical coordinates; measurement of time; use of telescopes.

551 Stellar Astronomy (3) Properties of stars; unusual stars, interstellar matter, and stellar evolution; distribution and motions of the home and other galaxies. PREREQ: any general descriptive astronomy course.

552 Space Science (3) Topics from astronomy and related sciences including problems and results of exploring the universe beyond earth's atmosphere.

556 Workshop in Aerospace Science (3) Activities and materials adaptable to elementary school instruction in aeronautics, astronomy, meteorology, rocketry, and space biology.

571 Astronomy in the Elementary School (3) Basic concepts in astronomy and their application to the elementary-school program.

575 Teaching Astronomy in the Secondary Schools (3) The use of the planetarium, observatory, and other special devices in teaching astronomy in the secondary school.

580 Astronomy in England (3) The development of astronomical theories and equipment in England from prehistoric times until the 20th Century. PREREQ: An introductory course in astronomy.

581 Geology of England (3) The major rocks, minerals and fossils of England and how they are used in the development of geologic principles. PREREQ: An introductory course in geology.

591 Independent Study (1-3) An investigation by a student. PREREQ: permission of department.

650 Institute of Planetarium Education (1-3) Fundamental concepts that can be taught in the planetarium; planetarium teaching methods; operation, use, and maintenance of the planetarium. Summers only.

SCI 522 Philosophy of Science (see PHI 522)

Any of the following dual-level courses (but not more than 6 semester hours of credit) may be taken for graduate credit toward the degree:

ESS 555 Intermediate Astronomy
ESS 565 Observatory Principles
ESS 576 Introduction to the Planetarium
ESS 590 Fundamentals of Soils
(all are 3-credit courses)

See also Marine Science

See also Science Education

Economics

Mr. Hassler, *Acting Chairperson*

PROFESSORS

Andrew W. Green, Ph.D., *University of Pennsylvania*
Eugene W. Schooler, Ph.D., *Harvard University*
Patrick J. M. Sylvester, Ph.D., *Bryn Mawr College*
Joseph M. Thorson, Ph.D., *Indiana University*

ASSOCIATE PROFESSOR

Eugene C. Hassler, M.B.A., *Indiana University*

The Department of Business and Economics has no master's degree program but offers the following courses. They are particularly appropriate

for the M.A. in social science, an interdisciplinary program given within the School of Social and Behavioral Sciences.

COURSE DESCRIPTIONS

Symbol: ECO

530 Economics and Public Policy (3) The principles and methods of economic analysis are applied to an evaluation of the American economic system. Inflation, recession, and economic growth; problems of public finance and taxation; public policy regarding the concentration of economic power.

531 Comparative Economic Systems (3) Essential economic features of economic systems, including capitalism, socialism, communism, and fascism.

532 History of Economic Thought (3) The growth and development of contemporary economic thought from Plato to the present, with emphasis on the mercantilist, classical, marginalist, and Keynesian schools.

535 The Soviet Economic Community (3) Analysis of economic relationships within the Soviet Bloc; communist economic activities abroad. PREREQ: ECO 232 or permission of instructor.

Educational Research

Dr. Peters, *Coordinator*

PROFESSORS

Martin J. Higgins, Ph.D., *University of Maryland*
Everett A. Landin, Ed.D., *Pennsylvania State University*
Ernest L. Peters, Ed.D., *University of Denver*

The School of Education, in cooperation with the Bureau of Research and Related Services, offers a degree program leading to the Master of Science in educational research. Designed primarily for those desiring research positions in local school districts, the degree is also appropriate for research positions in colleges and universities, community colleges, governmental agencies, regional educational laboratories, and industry.

Admission to Degree Program

The applicant will be admitted to the program on the basis of:

1. A minimum over-all average of 2.50 in undergraduate studies and 2.75 in the major field.
2. Graduate Record Examination Aptitude Test.
3. Personal interview with the coordinator of the program.

Any candidate admitted to graduate study, but not to the degree program in educational research, may take RES courses with permission of the co-

ordinator. There is no guarantee that courses taken by a non-degree student may later satisfy degree requirements for the M.S. in educational research.

Requirements for Admission to Degree Candidacy

Upon completion of 10 semester hours, which must include PSY 501—Introductory Statistics for the Behavioral Science and EDF 500—Methods and Materials of Research in Education, the candidates will be advanced to degree candidacy provided they have maintained a minimum average of 3.00 and passed a qualifying examination.

The Internship

After mastery of the tool courses (PSY 501, EDF 500, PSY 502, and RES 520), students will serve an internship with an outside agency conducting educational research. During this period they will utilize the skills they have developed to design and conduct a research project under the joint supervision of college and host institution personnel.

The Comprehensive Examination

To be eligible for the comprehensive examination the candidate must:

1. Have completed at least 28 semester hours and all tool courses prior to the semester in which the examination is taken.
2. Have maintained an overall average of at least 3.00.

Candidates must indicate by letter their intention to take the examination. The coordinator should receive this letter within the first 10 days of the semester in which the candidate desires the examination.

Candidates who fail the comprehensive examination are permitted one re-examination after an interval of at least one year but not more than two years.

Requirements for the Degree

1. Satisfactory completion of the curriculum outlined below.
2. An overall average of 3.00 in graduate courses taken in the degree program.
3. Satisfactory performance on the comprehensive examination.
4. Completion of research report or master's thesis approved by the coordinator.

MASTER OF SCIENCE IN EDUCATIONAL RESEARCH

(34 Semester Hours)

Required Courses:

Introductory Statistics for the Behavioral Sciences (PSY 501), Methods and Materials of Research of Education (EDF 500), Advanced Statistics for the Behavioral Sciences (PSY 502), Research Design (RES 520), Assessment Methods in Guidance (EDC 540), Introduction to Computers (CSC 501), The Emerging Curriculum (EDF 503), Education Foundations (EDF 510), Federal and State Role in Education (EDF 515), Advanced Educational Psychology (EDP 550), Internship Program in Education (RES 592) — 28 semester hours.

Research Project:

Research Report (RES 600) or Thesis (RES 610) 2-3 semester hours.

Electives:

3-4 semester hours to be chosen under advisement from the offerings of any department, with the approval of the department concerned and of the coordinator.

COURSE DESCRIPTIONS

Symbol: RES

520 Research Design (2) Principles for efficient design of experiments and other types of observational programs. Sampling techniques, methods of analysis, threats to valid inference. PREREQ: PSY 501.

530 Seminar in Non-Parametric Statistics (1) Selection and use of non-parametric tests for significance. Appropriate non-parametric tests for specific research designs are studied. One sample design and designs of two or more samples both independent and related are discussed. PREREQ: PSY 501.

590 Independent Study in Educational Research (1-3) Research project, reports, readings in educational research. PREREQ: coordinator's approval.

592 Internship Program in Educational Research (2) Opportunity for prospective educational researchers to design, conduct, and analyze a study and to prepare a report of the research. The internship is served in local educational agencies, county offices, federal project centers, the Pennsylvania Department of Education, or other research environments. The intern is supervised by both host and college personnel.

650 Research Report (2)

610 Thesis (3)

Elementary Education

Dr. Holman, *Chairperson*

PROFESSORS

Charlotte E. King, Ed.D., *Temple University*
Carrie C. Kulp, Ph.D., *Bryn Mawr College*
Erminio J. Peta, Ed.D., *Lehigh University*
Carlos R. Ziegler, Ed.D., *Temple University*

ASSOCIATE PROFESSORS

Nona E. Chern, M.S., *University of Pennsylvania*
James E. Habecker, Ed.D., *University of Pennsylvania*
Robert W. Herres, M.A., *Syracuse University*
E. Riley Holman, Ed.D., *Brigham Young University*
George W. Maxim, Ph.D., *Pennsylvania State University*
Carol A. Radich, Ph.D., *University of Maryland*

The department offers the Master of Education degree in elementary education, as well as non-degree programs for teachers working for professional growth.

Miller Analogies Test

Applicants for the master's degree program are required to take the Miller Analogies Test and submit scores with their initial application for admission. The application procedure will not be completed until the scores have been received.

Requirements for Admission to Degree Candidacy

1. Within the pre-candidacy period (the first 15 semester hours) the applicant must complete EDF 501 and two EDE courses.
2. Within the pre-candidacy period the applicant must maintain an average of 2.75 overall and 3.00 in elementary education.
3. Within the pre-candidacy period, the applicant must provide evidence of having Pennsylvania Instructional I Certification.

Students who fail to qualify as degree candidates are classified as non-degree students. (See "Reapplication for Degree Candidacy" under Academic Information.)

The Comprehensive Examination

In order to become eligible for the examination the student must:

1. Be a degree candidate.
2. Complete at least 28 semester hours including all required courses by the end of the semester preceding the examination.
3. Maintain an average of 2.75 overall and 3.00 in elementary education.

Applications for admission to the comprehensive examination are available from the Department and must be filed by December 1 for the February examination and May 1 for the July examination.

Candidates who fail the comprehensive examination are permitted to take one re-examination within a two-year period. Upon a second failure, candidates are automatically dropped from the degree program.

Dates for The Comprehensive Examination

The examination is given on the first Saturday in February and the second Saturday in July.

Requirements for The Degree

1. Satisfactory completion of the curriculum as given below. Both the selection and the sequence of courses should be determined in consultation with the appointed advisor.
2. An overall grade point average of at least 2.75 and a grade point average of at least 3.00 in elementary education. NOTE: All courses specific to elementary education are included in computing the grade point average in elementary education. Examples of such courses are LIT 550 and MAT 555.
3. Satisfactory performance on the comprehensive examination.

MASTER OF EDUCATION IN ELEMENTARY EDUCATION

This may be either a non-thesis program requiring 34 semester hours or a thesis program requiring 30 semester hours.

In either option the candidate must meet a professional education requirement including EDF 501, EDF 510, and EDP 550. Also required in either option is an elementary education area consisting of EDE 548, 549, 553, and an elective in either reading or elementary education.

Within the first session of enrollment the student confers with the assigned advisor to determine an appropriate and desirable area of concentration. The remainder of the program will be developed within the selected concentration. The choice of concentrations may be made from (A) areas offered by the Elementary Education Department or (B) areas offered by other departments. These are:

(A) Elementary Education Concentration Areas

Creative Teaching-Learning
Early Childhood Education
Elementary Education (General)
Human Development
Language Arts
Open Education
Social Studies

(B) Concentration Areas in Other Departments

Bilingual Education
Children's Literature
Mathematics
Reading
Science
Special Education

COURSE DESCRIPTIONS

Symbol: EDE

NOTE: *EDE 501 Introduction to Graduate Study in Elementary Education and EDF 500 Methods and Materials of Research have been combined in EDF 501 Methods and Materials of Research and Study for Elementary Education Majors, which is required of all degree students in elementary education beginning in 1975. See Department of Secondary Education and Professional Studies for course description of EDF 501.*

502 Introduction to Early Childhood Education (3) A basic course dealing with learning conditions which affect a young child in its early years. Historical and theoretical bases considered.

503 Contemporary Influences in Early Childhood Education (3) Investigations into current philosophy and empirical research related to the educational needs of young children.

504 Early Childhood Education Programs (3) Examination of recent program developments in the area of preschool-primary education.

505 Seminar in Early Childhood Education (3) Selected problems in early childhood education. PREREQ: permission of instructor.

522 Teaching the Communication Skills (3) Exploration of creative methods of teaching oral and written expression.

530 Social Studies in Elementary Education (3) Strategies for developing concepts, skills, and values in the social-studies program. Emphasis on making social studies more meaningful.

532 Curriculum and Research in Social Studies (3) Examination of recent research in elementary social studies with emphasis on the theoretical bases for making curriculum decisions. PREREQ: permission of instructor.

533 Seminar in Elementary Social Studies Education (3) Selected problems in elementary social studies: PREREQ: permission of instructor.

543 Creative Expression in the Elementary School (3) Theories and techniques to promote creative thinking and enhance children's creative potential in all areas of the school curriculum.

544 Open Education in the Elementary School (3) Emphasis on how learning occurs in open education. Planning environments and programs for children.

548 Curriculum Theory and Trends in Elementary Education (3) Evaluation of various theoretical framework of curriculum and trends in subject fields of elementary education. To be taken after 15 hours of work.

549 Theory and Trends in the Language Arts (3) Analysis and evaluation of language-arts programs including reading in the modern elementary school. PREREQ: EDE 548.

551 Child Development and Behavior I (3) Social, intellectual, emotional, physical, and moral aspects of child development and behavior. Emphasis on personal development of the teacher as a prerequisite to understanding children in the elementary school.

553 Child Development and Behavior II (3) Review of principles of growth and development. Theories of personality development; clues to identifying children with problems; therapies applicable to elementary-school children. Case study required. PREREQ: a recent course in child development.

554 The Child's Self Concept (3) Self-concept theory and its implications for child development, learning, and behavior; specific application to work with the elementary school child. PREREQ: course work in elementary education and child development.

555 Self-Processes of the Facilitator (3) Self-processes and other factors influencing interaction with students via exploration of feelings. Classroom approach that develops behavior in which feelings are expressed in a facilitating manner. PREREQ: EDE 553.

556 Seminar in Human Development (3) Critical issues in human development. PREREQ: permission of instructor.

560 Meeting Individual Needs of Children (3) Discovering each child's needs; providing for individualized learning; identifying problems and their solutions. PREREQ: course work in elementary education and child development.

561 Guidance in the Elementary School (3) Developmental guidance—philosophy, programs, personnel. Guidance role and responsibilities of the teacher in the classroom. PREREQ: course work in elementary education and child development.

565 Effective Classroom Management (3) Dynamics of interpersonal relations in planning and facilitating classroom instruction.

570 Supervision in the Elementary School (3) Concepts and practices in supervision of teachers, student teachers, and aides. PREREQ: course work in elementary education and child development.

580-589 Workshops in Elementary Education (2-6) Additional course numbers will be assigned as new areas of study are announced. Credits vary. The series presently includes:

580 Workshop in Elementary Education
581 Workshop in Open Education (Elementary)
562 Workshop in Social Studies
583 Workshop in Creativity
584 Workshop in Early Childhood Education
585 Workshop in Language Arts
586 Workshop in Curriculum: Diagnosis, Prescription and Evaluation

590 Independent Study (1-3) Enrollment by permission only; number of credits determined by instructor.

600 Research Report (1-2)

610 Thesis (4-6)

695 Seminar in Elementary Education (3) Selected topics in elementary education. To be taken during semester preceding the taking of the comprehensive examination in elementary education.

English

Dr. McKenty, *Chairperson*
Dr Brooks, *Coordinator of Graduate Studies*

PROFESSORS

Dorothy D. Bailey, Ph.D., *University of Wisconsin*
Thomas E. Berry, Ph.D., *University of Pittsburgh*
Michael W. Brooks, Ph.D., *University of Toronto*
Joseph Falgie, Jr., Ph.D., *University of Pennsylvania*
John P. Field, Ph.D., *University of Cincinnati*
Paul D. Green, Ph.D., *Harvard University*
J. Bernard Haviland, Ph.D., *Dublin University*
William H. Henry, Jr., Ph.D., *Temple University*
John P. Kent, Ph.D., *University of Illinois*
Alice B. Markow, Ph.D., *University of Pennsylvania*
Lynette F. McGrath, Ph.D., *University of Illinois*
David E. McKenty, Ph.D., *University of Pennsylvania*
Bernard S. Oldsey, Ph.D., *Pennsylvania State University*
S. Keith Taylor, Ed.D., *Temple University*
Robert H. Weiss, Ph.D., *Temple University*
Theodora Lee West, Ph.D., *University of Pittsburgh*
Elsie B. Ziegler, Ed.D., *Temple University*

ASSOCIATE PROFESSORS

Joseph B. Browne, M.A., *University of Pennsylvania*
William H. Fordyce, Ph.D., *Harvard University*
John L. Gaunt, Ph.D., *University of Maryland*
John T. Kelly, Ph.D., *University of Oklahoma*
Dwight L. McCawley, Ph.D., *University of Illinois*
Willie E. Page, Jr., M.A., *Florida State University*

The Department of English offers two degree programs: the Master of Arts in English and, in cooperation with the School of Education, the Master of Education in English. The Master of Arts permits the student to attain any of a number of goals. It may further scholarship in literature, language, and writing; prepare for study toward the Ph.D.; or provide a foundation for teaching in schools, community colleges, and junior colleges. The Master of Education is designed primarily to enhance the professional careers of English teachers. The Department of English also participates in an interdisciplinary program leading to the Master of Arts in Teaching English as a Second Language. (See Teaching English as a Second Language.)

In addition, the Department of English encourages students to take courses for professional growth and offers assistance and courses for students wishing to acquire certification in English.

ADMISSION TO DEGREE PROGRAMS

The applicant must (1) meet the general requirements for admission to degree study at West Chester State College (See appropriate pages at the beginning of the Graduate Studies Bulletin.), (2) submit results of the Aptitude Test (Morning Test) of the Graduate Record Examination, (3) satisfy departmental requirements for admission, and (4) take any additional undergraduate and/or graduate course work deemed necessary.

DEGREE REQUIREMENTS

1. For both the M.A. and M.Ed., ENG 500 (3 credits) is required and should be taken before the completion of 12 graduate credits.
2. For the M.A., an additional 27 graduate credits in English are required, for a total of 30.
3. For the M.Ed., ENG 591 plus an additional 18 graduate credits in English and 10 in Education (See School of Education, page 129) are also required for a total of 34.
4. For both the M.A. and M.Ed., students may substitute course work in approved related fields (e.g., history, linguistics) for up to 6 of the credits in English.
5. For both degrees, students must pass a written comprehensive examination, offered the second Wednesday of October, April, and July. Those who fail the examination twice must obtain the approval of the Department of English to take it a third and final time.

Students wishing more information about graduate work in English than is provided above should obtain a copy of the *Handbook for Graduate English Students* from the Coordinator of Graduate Studies in English.

COURSE DESCRIPTIONS

Symbol: ENG

GENERAL TOPICS (500-514)

500 Methods and Materials of Research (3) Basic techniques and procedures in research. The major types of research and the methods of locating, evaluating, and interpreting evidence. Includes the preparation of a research outline and paper.

501 Applied Literary Criticism (3) Study of various methods of literary analysis, with emphasis on the application of these methods in response to specific works of literature chosen from the principal genres of poetry, fiction, and drama.

502 History of Criticism I (3) An historical study of literary criticism and aesthetic theory from Aristotle to Johnson.

503 History of Criticism II (3) An historical study of major texts and movements in literary criticism from Sainte-Beuve to Hartman and contemporaries.

504 Shakespearean Literary Criticism (3) Survey of Shakespearean critical schools; student analysis of a play's interpretation or an interpretive problem.

507 Literature Seminar (3) Topics announced annually.

508 Writing Seminar (3) Discussion and development of major projects underway.

509 Writing Seminar in the Novel I (3) A course in the writing and preparing of book-length manuscripts (novel, novella, "non-fictional" novel) with the intention of submission for publication. Also includes coverage of fictional aspects and techniques used in writing memoirs, biography, current history.

510 Writing Seminar in the Novel II (3) A continuation of ENG 509.

ENGLISH LITERATURE (515-544)

517 Beowulf (3) An analysis of the entire poem in Old English. Emphasis on the artistic, linguistic, and historic values. PREREQ: ENG 584 or the equivalent.

518 Chaucer (3) A study of the **Canterbury Tales** and **Troilus and Criseyde.**

519 16th-Century Poetry and Prose (3) A survey of the major poetry and prose written in England during the Tudor period: Skelton to Shakespeare.

520 Spenser and Milton (3) The major works of Spenser and Milton studied in relation to the intellectual climate of the Renaissance. Emphasis on the **Faerie Queene** and **Paradise Lost.**

521 Major Renaissance Writers (3) A study in depth of five major figures of the Renaissance. Intellectual background and literary influences.

522 English Drama to 1642 (3) A survey of English Drama (exclusive of Shakespeare) from its medieval beginnings to the closing of the theatres in 1642.

524 Jacobean and Caroline Drama (3) English dramatic literature from 1603 to 1642. Includes Jonson, Marston, Webster, Chapman, Middleton, Rowley, Tourneur, Ford, Shirley, Beaumont, and Fletcher.

525 Shakespeare's Tragedies and Histories (3) Four histories and seven tragedies read with analysis of dramatic and poetical effects.

526 Shakespeare's Comedies and Poems (3) Nine comedies analyzed. The poems read in relation to Shakespeare's developing, dramatic and poetic power.

527 17th-Century Poetry and Prose (3) A study in depth of the major 17th-century English poets and prose writers from Donne to Milton.

529 18th-Century Poetry and Prose (3) A study of the literature of the era, with emphasis on the cultural context, aesthetic theory, and the evolution of poetic techniques.

530 Restoration and 18th-Century Drama (3) Critical history of British drama from the reopening of the theaters to Sheridan. Major playwrights and study of theater history.

531 18th-Century British Novel (3) A study of the rise of the novel and its development in the 18th Century. Major novelists treated: Defoe, Richardson, Fielding, Smollett, Sterne.

533 Romantic Poetry and Prose (3) The poetry and prose of the early 19th century with emphasis upon the five major poets (Wordsworth, Coleridge, Byron, Shelley, Keats) and three major essayists (Lamb, Hazlitt, De Quincey).

534 Victorian Poetry and Prose I (3) A study of Victorian poetry and prose (exclusive of the novel) to 1870: Tennyson, Browning, Ruskin, Arnold, Carlyle, Newman, Darwin, Swinburne.

535 Victorian Poetry and Prose II (3) A study of the Victorian poetry and prose (exclusive of the novel) of the late 19th Century: Hopkins, Pater, Morris, Wilde, Shaw, Hardy.

536 19th-Century British Novel (3) Development of techniques in the British novel from Scott to Hardy.

537 Modern British Novel (3) A study of the British novel from 1914 to the present.

538 Modern British Poetry (3) The course will provide both historical and critical information about the period covered, and investigate, in considerable detail, the chief works of several important poets—Auden, Eliot, Hardy, Hopkins, and Yeats, for example.

539 Major 20th-Century Irish Writers (3) A comprehensive study of significant Irish writers of the 20th century: Yeats, Joyce, O'Casey, Synge, O'Connor, O'Faolain.

540 Joyce and Beckett (3) Detailed critical analysis of Joyce's **Dubliners, A Portrait of the Artist as a Young Man, Exiles,** and **Ulysses;** Beckett's drama and novels.

541 20th-Century Drama (3) Principal British and American playwrights from Shaw to Pinter and Albee.

544 Seminar in English Literature (3) Topic announced when offered.

AMERICAN LITERATURE (545-564)

547 American Literary Movements (3) Major movements in the development of American literature. Influence of leading writers on literary concepts, trends, and critical dicta: Topics to be announced.

548 Hawthorne and Melville (3) A study of their works and representative literary criticism.

549 Emerson and Thoreau (3) The works of Emerson and Thoreau and writers associated with them.

550 Twain and James (3) The works of Mark Twain and Henry James, and representative literary criticism.

551 Hemingway and Faulkner (3) The works of Hemingway and Faulkner and the literary relationship of these works.

556 Literary Spokesmen for American Ideas (3) Intensive study of American writers who have depicted and interpreted major intellectual currents in American culture. Modern writers who deal with problems of American life.

557 Major 20th-Century American Poets (3) A close study of several major modern American poets.

558 20th-Century American Writers (3) Major writers and literary movements from 1900 to the present: Topics to be announced.

562 Modern Afro-American Literature (3) An intensive study in themes and trends in modern Afro-American literature.

564 Seminar in American Literature (3) Topic announced when offered.

COMPARATIVE LITERATURE (565-574)

565 Comparative Literature (3) Studies in international literary and cultural relations; the characteristics and relations of universal literary types, themes, and genres: Topics to be announced.

566 Comparative Literature: The Greek Myths (3) The function and purpose of the Greek myths and their treatment in Western literature.

570 British and Continental Short Story (3) The short-story form; its origin and development. Current trends. Influences of German, French, and Russian writers upon the British form.

571 Biography (3) Survey of biographical writings from Plutarch to the present. Origins and trends.

572 Shakespeare's Predecessors in Drama (3) Development of the drama from classical antiquity to Shakespeare. The nature, structure, and other aspects of the principal types of pre-Shakespearean drama.

LANGUAGE (575-589)

575 Structure of Modern English (3) A detailed analysis of the modern descriptive approach to the study of English grammar and how it compares with the traditional approach.

576 English as a Second Language (3) Implications of the nature of language in teaching English to speakers of other languages. Methods and materials for teaching English as a second language. PREREQ: LIN 501 or permission of instructor.

577 History of the English Language (3) Review of the major influences on the development of the English language. PREREQ: LIN 501 or LIN 503.

578 Modern English (3) A study of the development of the English language from 1450 to the present (exclusive of American English).

579 Studies in American English (3) Historical processes in the development of American and British English. Regional and social dialects of American English. Usage and sociolinguistics.

580 English Language Workshop (1-4) Workshop to survey recent developments and newer concepts in English linguistics for teachers. Variable structure and credit, by arrangement with individual school districts.

584 Old English Language and Literature (3) An introductory study of the language through a reading of selected religious and secular poetry and prose.

585 Middle English Language and Literature (3) An introductory study of the language (1150-1450) through a reading of selected texts (exclusive of Chaucer).

590 Independent Study (1-3) Research projects, reports, specialized readings. PREREQ: approval of instructor and coordinator of graduate studies in English.

TEACHING SKILLS (591-599)

591 Modern Techniques for the Teaching of English (3) Techniques of teaching language arts, composition, and literature in the secondary school. Practice in planning and designing units and courses of study. Exploration into the latest research in teaching English.

592 Literature for the Elementary School (3) The content and approach of the literature program in the elementary school.

593 Literature for the Secondary School (3) An examination of the literary interests of the secondary school student. A discussion of the works of major writers who appeal to the teen-age student.

595 Poetry: Understanding, Evaluating, Teaching (3) An intensive study of poetry in English, designed to provide a thoroughly professional competency in the reading, evaluating, and teaching of poetry.

599 Workshop in English (1) Each workshop will focus on specific issues and problems in the teaching of English and will introduce appropriate instructional materials and techniques.

Ethnic Studies

COURSE DESCRIPTION

SSC 580 Ethnic Cultures Workshop (3) This workshop considers the traditions, customs, present societal status, and contributions to American life of many ethnic groups. The guest-lectures and special programs are designed to increase the students' knowledge of the multicultural nature of American society today. Projects, specifically tailored to the students' individual needs, are directed by a faculty member of the Ethnic Studies Committee of West Chester State College.

(Contact the Director of Ethnic Studies for other ethnic-oriented courses.)

Foreign Languages

Dr. Frieman, *Chairperson*
Dr. Lombardi, *Graduate Coordinator*

FRENCH

PROFESSORS

Madelyn Gutwirth, Ph.D., *Bryn Mawr College*
Alfred D. Roberts, Ph.D., *University of Pennsylvania*

ASSOCIATE PROFESSOR

Marianne H. Kulaski, M.A., *Villanova University; Certificat d'études francaises, University of Geneva*

ASSISTANT PROFESSOR

Robert Greene, M.A., *University of Pennsylvania*

GERMAN

ASSOCIATE PROFESSOR

Ronald L. Gougher, M.A., *Lehigh University*
Richard A. Schneider, M.A., *University of Heidelberg; Diploma, University of Barcelona*

ASSISTANT PROFESSOR

Ralph A. Eisenstadt, M.A., *University of Illinois*

LATIN

PROFESSOR

Walter E. Frieman, Jr., Th.D., *Philadelphia Divinity School*

SPANISH

PROFESSORS

Ronald P. Lombardi, Ph.D., *University of Pennsylvania*
Benjamin Núñez, Ph.D., *Columbia University*
Philip D. Smith, Jr., Ph.D., *Ohio State University*

ASSOCIATE PROFESSOR
Jorge Escorcia, M.A., *Boston University*

The Department of Foreign Languages offers two degree programs, one leading to the Master of Education in French, Spanish, German, or Latin, and the other to the Master of Arts in French or Spanish.

The department also cooperates in the offering of an interdisciplinary program leading to the Master of Arts degree in Teaching English as a Second Language. *(See Teaching English as a Second Language.)*

MASTER OF EDUCATION IN FRENCH, SPANISH, GERMAN, OR LATIN

34 Semester Hours

The M.Ed., program requires Methods and Materials of Research in Second Language Education (LAN 500), Techniques of Second Language Teaching (LAN 503), and 18 semester hours in the area of concentration. The concentration may be designed to the student's particular interests and needs; but in French, Spanish, or German, it must include one course each from Groups A, B, C, and D. In Latin the 18-hour concentration is developed from Groups A and B under advisement. Majors in any of the languages may also elect from "Courses Common to all Languages" (see below) for their concentration.

At least 10 semester hours of course work in education are required. See page 129 in School of Education.

COURSES COMMON TO ALL LANGUAGES

Introduction to Linguistics (LIN 501) and courses LAN 502 through LAN 600. (See Offerings in Foreign Languages.)

FRENCH

Group A
FRE 511-12-13-14-15-16

Group B
FRE 520-21-22-23-24-25

Group C
FRE 530-31-32-33-34

Group D
FRE 540-41-42-43-44

GERMAN

Group A
GER 511-12-14-15

Group B
GER 520-21-22-23-24-25-26

Group C
GER 531-32-33-34-35

Group D
GER 540-41-42-43-44-45

LATIN

Group A
LAT 503-11-12-14

Group B
LAT 513, 515, 520 through 531, and 535, 536

SPANISH

Group A
SPA 510-11-12-14

Group B
SPA 520-21-22-23-24-25

Group C
SPA 530-31-32-33-34

Group D
SPA 540-41-42-43-44-45

MASTER OF ARTS IN FRENCH OR SPANISH

(30 Semester Hours)

The M.A. programs in French or Spanish provide for either a thesis or non-thesis option. Both require 21 semester hours in the language as follows:

FRE or SPA 511 and 6 hours from Groups B, C, and D above. The thesis program includes LAN 610 and an additional elective 3 hours in the concentration. The non-thesis option allows 9 semester hours of electives in the area of concentration.

Electives for both options may also be from "Courses Common to All Languages." (See above.) For the M.A. program LAN 550 is strongly recommended.

The candidate for the M.A. degree must pass a reading examination in a second foreign language or must have taken and passed at least one graduate-level course in a second foreign language.

COURSE DESCRIPTIONS

COURSES COMMON TO ALL LANGUAGES

Symbol: LAN

500 Methods and Materials of Research in Second Language Education (3) Techniques of research in foreign language education including sources, design, interpretation, evaluation, and reporting of data.

502 Second Languages in the Elementary School (3) Problems in teaching second languages in the elementary school. Curriculum design, bilingual education, classroom techniques, articulation, materials, testing. Preferably, LIN 501 or equivalent should precede LAN 502.

503 Techniques of Second Language Teaching (3) Advanced course in recent theoretical bases; methods for teaching beginning and advanced levels; curriculum design and evaluation. PREREQ: LIN 501 or equivalent.

504 Use of Media in Language Teaching (3) Role of media in language instruction including the tape recorder, language laboratory, television, and the computer.

505 Introduction to Bilingual/Bicultural Education (3) Introduction to history, philosophy, current status, and future directions of Bilingual/Bicultural Education. Survey of materials, tests, techniques, instructional processes and instructional patterns. Over-view of testing, placement, and pupil evaluation.

511 Roman Civilization (3) Roman civilization and its influences on Europe.

550 Seminar in Methods and Materials of Research (3) The principal tools of research in the field of foreign languages and literature. Methods of conducting and reporting research, emphasizing correctness of form and mechanics of scholarly writing.

560 Directed Studies (3) To provide an opportunity for students to pursue areas of study not regularly provided by the department. Focus of course to be announced when offered.

580 Seminar in Second Language Education (1-4) Specialized workshop seminar devoted to a particular area of foreign language education.

585 Institute in Second Language Education (4-8) In-depth study of a particular area of foreign language education.

590 Independent Study (1-3)

600 Research Report (1-2)
610 Thesis (6)

See also Linguistics (LIN)

FRENCH

Symbol: FRE

511 Romance Philology (French) (3) Historical development of French phonology and morphology from their beginnings to the present. Old French dialects.

512 Explication de Textes (3) This French technique of textual and stylistic analysis is studied and practiced.

513 Phonetics (3) Mastery of pronunciation and intonation of the French language through use of the phonetic alphabet. Laboratory drill with recordings of leading phoneticians.

514 Advanced Grammar and Stylistics (3) A conceptual approach to French grammar. Principles of French grammar and syntax; evaluation of recent changes in grammar and usage.

515 French Civilization (3) French civilization as reflected in its art, music, philosophy, and socio-political structure.

516 Exercises de Style (3) A study of French literary styles and the language of French literary criticism.

520 Rabelais (3) Rabelais: Critical studies of his life and works.

521 Moliere (3) The plays of Moliere; his life and times. History of comedy in France.

522 Voltaire (3) Major works of Volatire. Analytical scrutiny of his philosophical views. The impact of Voltaire on the character of Western civilization.

523 Rousseau (3) The works of Rousseau; their philosophical implications and stylistic character. Analysis of the important critical writings on Rousseau.

524 Balzac (3) The works of Balzac and a review of Balzacian criticism.

525 Proust (3) Reading and analysis of *A la recherche du temps perdu.* Survey of Proustian criticism; Proust the man. His place in the history of the novel.

530 French Classical Tragedy (3) The tragedies of Corneille and Racine; the history of tragedy in France.

531 The French Novel (Through the 19th Century) (3) History of the novel in France. The works of the major French novelists of the 19th century: Hugo, Stendhal, Balzac, Flaubert, Zola.

532 The 20th Century French Novel (3) The French novel in the 20th century and the philosophical, social, and aesthetic doctrines which helped to shape this literary form.

533 French Lyric Poetry (3) Evolution of French lyric poetry, with stress on the 19th century. Forms, techniques, rules of French versification.

534 The Contemporary French Theater (3) Principal dramatic works of the 20th century, analyzed against the history of the theater in France.

540 Medieval French Literature (3) Selected literary masterpieces, representing the various medieval genres: lyric poetry, epic, romance, allegory, fabliaux, prose chronicle, and drama.

541 French Literature of the Renaissance (3) Evolution of literary doctrine in the French Renaissance. Influence of various philosophical and aesthetic currents such as Platonism and Petrarchism.

542 Studies in the 17th Century (3) Selected writers and their works. Development of literary and aesthetic doctrines of the classical period.

543 Studies in the 18th Century (3) Selected masterpieces of the 18th century. Evolution of social and political ideas as reflected in the literary activity of the period.

544 Studies in the 19th Century (3) Selected writers of the 19th century in France. An examination of the literary doctrines which evolved through the century.

GERMAN

Symbol: GER

511 German Philology (3) German phonology and morphology from their beginnings to the present. Chief characteristics of Gothic, Old Saxon, and Old High German. Analysis of the language of the Low German Heliand and earliest High German documents.

513 Phonetics (3) The sounds, forms, and structure of modern standard German, using recorded materials and selected texts.

514 Advanced Grammar and Stylistics (3) Stylistic qualities of modern German, analyzed in selected texts. Oral and written drill.

515 German Civilization (3) Social structure of Germany; evolution of its institutions; German achievements in the arts.

520 Goethe (3) Goethe's works and his development toward classicism. Critical works dealing with his life and writings.

521 Schiller (3) Schiller's dramatic works and his development toward classicism. Critical works dealing with his life and writings.

522 Rilke (3) Rilke's poetical works and major critical works which deal with his life and writings.

523 George (3) George's poetry and major critical works dealing with his life and writings.

524 Thomas Mann (3) The novels of Mann; works dealing with his life and writings.

525 Bertold Brecht (3) The theater of Brecht and critical literature dealing with his life and writings.

526 Kafka (3) The works of Kafka; criticism dealing with his life and writings.

531 The 20th Century German Novel (3) The works of the major novelists with particular attention to the writers of "Gruppe 47" (post-World War II writers).

532 The Novelle (3) The German short story from Goethe to the present, including the German Feuilleton and the post-World War II writers.

533 German Lyric Poetry (3) Major representative poets of the 19th and 20th century.

534 German Drama of the 19th Century (3) The works of the major German dramatists of the 19th century.

535 German Drama of the 20th Century (3) The works of the major dramatists of the 20th century with attention to expressionism and post-World War II dramatists.

540 German Literature of the Middle Ages (3) German literature of the Middle Ages with emphasis on the Popular and Court Epic and the lyric poetry of the Golden Age.

541 Poetry of the Reformation and the Baroque Period (3) Literary trends in the Reformation and the Baroque Period.

542 The Enlightenment and Storm and Stress (3) The masterpieces of Enlightenment and Storm and Stress. Attention to English influences, especially Shakespeare.

543 The German Romantics (3) Selected writers of the German Romantic period.

544 19th Century German Realism (3) Major prose and poetry of German realists.

545 The German Expressionists (3) Major representative poets of the expressionistic movement.

LATIN

Symbol: LAT

503 Techniques of the Teaching of Latin (3) Survey and analysis of texts and other materials for teaching Latin. Recent methods for elementary and secondary levels. Curriculum for the secondary level.

511 Comparative Grammar and Syntax of Greek and Latin (3) The relation of Greek to Latin within the Indo-European family of languages. Survey of the external histories of Greek and Latin. Greek and Latin phonology and morphology with references to principles of syntax.

512 History of the Latin Language (3) Development of the Latin language from the earliest inscriptions to the 9th century A.D., with some consideration of the prehistoric language and people of Rome.

513 Italic Dialects (3) The Italic branch of the Indo-European family of languages, exclusive of Latin: Oscan and Umbrian grammar. Italic inscriptions. Brief survey of other dialects.

514 Advanced Latin Prose Composition and Translation (3) Intensive review of Latin syntax, with translation of English passages into Latin and vice versa.

515 Seminar in Greek and Roman Civilization (3) A study of literary texts and archaeological documents illustrative of the Greek mind and/or the Roman genius.

521 Cicero's Philosophical Essays (3) Studies in the *Somnium Scipionis, Tusculan Disputations, De Natura Deorum and De Officiis* with reference to Cicero's political theory and practice.

522 Virgil, Eclogues and Georgics (3) Studies in the themes and methods of Virgil's *Eclogues* and *Georgics.*

523 The Elegiac Poetry of Ovid (3) Development of Greek elegy and studies in the elegiac poetry of Ovid.

524 Comedies of Plautus (3) Origins of "comedy of manners," studies in Plautian comedy and in its influence upon later writers of comedy.

525 Latin Metre and Verse (3) The formal structure and development of Latin verse from its beginnings to the 20th century. Illustrative readings in early, classical, medieval, and modern Latin poetry.

526 Greek and Latin Epic (3) The Greek epic from Homer to Apollonius of Rhodes and the Latin epic from Naevius to Virgil Readings from the classical epics.

527 Roman Historiography (3) Selections from Sallust, Caesar, Livy, Tacitus, and Suetonius. Origins, development, and influence of Roman historiography.

528 Roman Satire (3) History of Roman satire and the development of Lucilian Satire. A comparative study of the satires of Horace, Persius, and Juvenal.

529 The Latin Novel (3) Emergence and development of the Latin novel. Readings in Petronius' *Cena Trimalchionis,* Seneca's Apocolocyntosis, the Pompeian Inscriptions, and Apuleius' *Metamorphoses.*

530 Medieval Latin Literature (3) Latin poetry and prose from the 4th to the 17th centuries, with emphasis on the acquisition of good reading knowledge of medieval Latin in different periods and styles.

531 Latin Epigraphy (3) Latin inscriptions from the earliest period to the 8th century A.D. A study of the development of the Latin language.

535 Seminar in Interpretation of Latin Literature (3) Study of various modern approaches to Latin literature. Analysis of selected passages or themes from selected authors.

536 Literary Criticism in Antiquity (3) Study of selected authors or works with reference to both ancient and modern (e.g., Horace and Quintilian) criticism and interpretation.

SPANISH

Symbol: SPA

510 Advanced Spanish Phonetics (3) Theoretical and practical approach to phonology, phonetics, and phonetics transcription. Regional and dialectical variations, using Tomas Navarro Tomas' *Manual de pronunciacion española.*

511 Romance Philology (Spanish) (3) The development of Old Spanish from Vulgar Latin and Protoromance, with analysis of Spanish phonology, morphology, and syntax. Readings in Old Spanish.

512 Advanced Spanish Grammar and Stylistics (3) An informal rapid review of Spanish grammar, with emphasis on problems fundamental to the American classroom. Exercises include idiomatic expression, various levels of style, and translation.

513 Advanced Oral Spanish (3) An intensive course for teachers and professionals seeking improvement in oral Spanish. Emphasis on vocabulary and idiom acquisition via discussions, readings, and reports.

514 Spanish Civilization (3) Major philosophical and artistic contributions of the Hispanic world to Western civilization. Spain's social and economic institutions, and the character of her people as reflected in the arts.

520 Cervantes (3) Life and works of Miguel Cervantes Saavedra: *Novelas ejemplares, Ocho comedias y ocho entremeses, La Numancia, La Galatea,* all of which lead to study of the meaning, philosophy, and influence of *Don Quixote.*

521 Juan Ruiz, Arcipreste de Hit (3) The *Libro de Buen Amor* as a major work in Spain's poetic development.

522 Lope de Vega (3) The Spanish *comedia,* viewed as an expression of the Spanish people. The popular and national elements of this theater. Lope de Vegas as the chief innovator and leading figure of the first half of the Golden Age.

523 Galdso (3) Benito Perez Galdos: his novels of social reform, enlightenment, and conversion.

524 Valera (3) Juan Valera's psychological novels, set in 19th century Andalusia.

525 Unamuno (3) The philosophical ideas of Unamuno studied in his critical essays, plays, and novels.

530 Spanish Comedia of the Golden Age (3) Survey of the *comedia* before Lope de Vega; the contributions of Lope de Vega; Tirso de Molina and Ruiz de Alarcon; the Baroque theater of Pedro Calderon de la Barca.

531 The Spanish Novel Before Cervantes (3) Survey of the main trends of Spanish prose before Cervantes. The novels of chivalry, *El Conde Lucanor,* and the "novela sentimental."

532 The Picaresque Novel (3) The picaresque novel as an indigenous creation of Spain; Lazarillo de Tormes, Guzman de Alfarache, Vida del Buscon; the picaresque novel as a tradition to Spain and an influence in other literature.

533 The Generation of 1898 (3) The revitalizing forces which took hold in the late 19th century and a study of the works of Unamuno, Azorin, Menendez Pidal, Pio Baroja, Valle Inclan, Benavente, Martinez Sierra, and Ruben Dario.

534 Spanish Lyric Poetry (3) Spanish lyric poetry, with emphasis on early forms, the Renaissance, Italianate forms, and the blossoming of lyric poetry in the 19th and 20th centuries.

540 Medieval Spanish Literature (3) The *mester de juglaria* and the *Poema del Cid;* early related epics and the *mester de clerecia;* Spain's early historical chronicles. Beginnings of the Spanish theater.

541 The Renaissance in Spain (3) Leading proponents of the humanistic spirit in Spain: Nebrija, Erasmus, the borthers Valdes. The Spanish Inquisition, the Renaissance theater and novel: Juan del Encina, Torres Naharro, and *la Celestina.*

542 Spanish Romanticism (3) The Spanish Romantics and *costumbristas:* Duque de Rivas, Espronceda, Gomez de Avellaneda, Becquer, Larra, Mesonero Romanos. The dramatic novels of Pardo Bazan, Palacio Valdes, Clarin, and Galdos.

543 Contemporary Spanish Theater (3) The "Ibsenite" and social dramas of the late 19th century represented by the plays of Lopez de Ayala, Jose Echegaray, and Galdos. The transition period headed by Martinez Sierra and the brothers Quintero. Spain's modernistic drama exemplified by Federico García Lorca and Alejandro Casona.

544 Masterpieces and Movements in Spanish Literature (3) A seminar on the development of Spanish thought and artistic expression through selected masterpieces of literature and art.

545 The Latin American Novel (3) The development of the novel in Latin America. The colonial period, the period of independence, the romantic period; realism, modernism, *criollismo,* and naturalism.

546 The Black in Spanish American Literature (3) The characterization of blacks in Spanish American literature and the political and social context of their portrayal.

556 Seminar I (3)

557 Seminar II (3)

Geography and Planning

Mr. Grassel, *Chairperson*

PROFESSOR
George Langdon, Ph.D., *Clark University*

ASSOCIATE PROFESSORS
F. Robert Bielski, M.A., *University of Illinois*
Charles W. Grassel, M.S., *University of Pennsylvania*
William J. Rampon, M.A., *University of Oklahoma*
John C. Tachovsky, M.Ed., *West Chester State College*

ASSISTANT PROFESSOR
Arlene C. Rengert, M.A., *The Ohio State University*

The Department of Geography and Planning offers three programs. The Graduate Record Examination is required for admission and diagnostic purposes in all of these degree programs.

MASTER OF ARTS IN GEOGRAPHY

33 Semester Hours

1.	Required Courses GEO 500, 503, 505, 581, and 585	15 s.h.
2.	Thesis GEO 610	6 s.h.
3.	Language or Statistics Passing either a reading proficiency test in French, German, or Spanish, or a course in advanced statistics.	0 s.h.
4.	Elective Courses Selected under advisement from Geography, Geology, Mathematics, Statistics, or Computer Science.	12 s.h.

MASTER OF ARTS IN SOCIAL SCIENCE
Concentration: Geography

30 Semester Hours

1.	Research Area GEO 500, and 581	6 s.h.
2.	Geography Electives Selected under advisement from offerings shown below.	9-12 s.h.
3.	Social Science Electives Selected under advisement from at least two departments of the School of Social and Behavioral Sciences.	12 s.h.
4.	Cognate Electives Selected under advisement from any school in the college.	0-3 s.h.

MASTER OF EDUCATION IN GEOGRAPHY

34 Semester Hours

1. Professional Education Requirement, see page 129 — 10-12 s.h.
2. Geography Concentration — 20-22 s.h.
   Required Courses (6 s.h.)
   GEO 500, and 584
   Geography Electives (14-16 s.h.)
   A minimum of one course from each of the following groups:
   Group 1. Earth Studies
   GEO 501, 502, 503, 504, and 506
   Group 2. Cultural Studies
   GEO 521, 524, 525, 526, 529, 571, or 572
   Group 3. Regional Studies
   GEO 540, 542, 543, 544, 545, or 546
   Group 4. Methods, Techniques, Seminars, and Thesis
   GEO 505, 507, 508, 581, 585, 590, 591 through 594, or 610
   If a candidate elects to write a thesis (GEO 610) the credit produced in the M.Ed. program will be 3.
3. Electives — 0-4 s.h.
   Selected under advisement in either academic or professional-education course work.

COURSE DESCRIPTIONS

Symbol: GEO

500 Methods and Materials of Geographic Research (3) Sources of geographic information and methods of compiling it into reports and geographic writing. An outline for either a thesis or a research report is prepared. Offered in fall.

500 Advanced Geomorphology (3) Landform structures and processes which brought them about. Interpreting landforms in relation to cultural geography with topographic maps and aerial photographs. Not to be offered 1977-1978.

502 Regional Geomorphology of North America (3) Geological analysis of surface configurations of North America, with emphasis on geographical relationships to these features. PREREQ: introductory geology or geomorphology. Not to be offered 1977-1978.

503 General Climatology (3) Meteorological factors influencing climates of the world and their general patterns. Survey of world climates. Not to be offered 1977-1978.

504 Climatology of the Continents (3) The earth climates are examined on a continental basis, with emphasis on problem climates that deviate from the normal pattern. Not to be offered 1977-1978.

505 Advanced Cartography (3) Cartographic methods and techniques. Presentation of statistical data in map form. PREREQ: introductory cartography or consent of instructor.

506 Advanced Physical Geography (3) Basic aspects of physical geography in the total geographic concept. Not to be offered 1977-1978.

507 Advanced Map Interpretation (3) Designed to improve map-reading skills. Emphasis on increased understanding of U. S. G. S. quadrangles and special-purpose statistical maps.

508 Research Design and Analysis (also CRJ 508) (3) Emphasis upon social-research processes: problem identification; data collection and use; application of statistical procedures and computer techniques; hypothesis testing and problem resolution in social planning and decision-making.

521 Suburbanization and Land Development (3) Component systems and functional operations of urban/suburban communities, including ecological and demographic aspects. Emphasis upon organization, development, change, and problems of communities.

524 Geography of Population (3) Characteristics and distribution of world populations are studied.

525 Urban and Regional Planning (3) Application of community-planning theories and methods to designated urban and regional systems.

526 Metropolitan Systems and Problems (3) Urbanization processes and problems; urban systems in the expanding metropolitan and regional setting; present and proposed efforts to solve urban problems.

529 Geographic Influences in World History (3) Effect of geographic factors upon selected movements, occurrences, eras, and cultural groups in modern world history.

540 Geography of the United States (3) A regional study of the United States, emphasizing relationships between physical geography and man's economic and political responses to environmental circumstances.

542 Geography of Canada (3) Physical and cultural regionalism of Canada. The natural resources; pattern of human occupance including agriculture, industry, and transportation.

543 Geography of Mexico and Middle America (3) Regional geography of Mexico, Central America and the West Indies. Political divisions and their present-day relations and geographic conditions. Inter-American affairs are considered.

544 Geography of South America (3) Regional geography of South America: its physical base, settlement, agriculture, mining and manufacturing. Inter-American relations are considered.

545 Geography of Europe (excluding the U. S. S. R.) (3) Regional study of Europe. Influence of environmental factors, such as climate, landforms, and soils on the economic, social, and political condition of European nations.

546 Geography of the Soviet Union (3) European and Asiatic U. S. S. R. and its satellite nations. Elements of the environment and regional divisions in relation to resource base and economic/political objectives.

571 Conservation Workshop (3) An appraisal of resource conservation and resource management practices in the context of regional planning.

572 Seminar in Resource Management (3) Research problems in resource management, done on an individual-student, or team-study basis.

581 Seminar in Modern Philosophy of Geography (3) Modern geographic thought with emphasis on contributions of American geographers and their most recent views.

584 Modern Techniques of Teaching Geography (3) Contemporary methods and resources for the formulation. organization, presentation, and evaluation of geographic instruction.

585 Geography Field Methods (3) An advanced field course which includes urban and land-use studies. Utilization of field methods, mapping, and data collection into geographical reports.

590 Independent Studies in Geography (1-3) Research projects, reports, readings in geography. PREREQ: approval of department chairperson.

591-594 Area Field Studies (3 s.h. for each study) A specific geographic region or area is selected for on-site, field study in each course. The specific course number is assigned as new areas of study are announced. The series includes:
GEO 591 Field Study (Local)
GEO 592 Field Study (Puerto Rico)
GEO 593 Field Study (Europe)
GEO 594 Field Study (Jamaica)
Offered in Summer only.

610 Thesis (3 or 6) A thesis is developed on a research problem for which the student develops a theory, proposition or hypothesis, and investigates available information on the subject.

Government and Politics

Mr. Burton, *Chairperson*

PROFESSORS
Thomas J. Brady, J.D., *Temple University*
Clifford H. Harding, Ph.D., *New York University*
Charles G. Mayo, Ph.D., *University of Southern California*
James S. Milne, Ph.D., *Temple University*
John C. Shea, Ph.D., *University of Pittsburgh*

ASSOCIATE PROFESSORS
William F. Burns, M.A., *Case Western Reserve University*
A. Wayne Burton, M.A., *University of Pennsylvania*
David S. Eldredge, A.M.T., *Harvard University*
Lawrence V. Iacono, M.Ed., *West Chester State College*

ASSISTANT PROFESSOR
Robert J. Marbach, Ph.D., *Temple University*

The Department of Government and Politics offers two programs. One leads to the Master of Arts in social sciences with a concentration in political science. The second, given in cooperation with the School of Education, leads to the Master of Education in social science with a concentration in political science.

The Master of Arts program is particularly relevant to teachers who wish to strengthen subject-matter knowledge in more than one academic discipline. This concentration is also highly appropriate for persons active in

government, politics or industry, as well as for those who wish to enrich their cultural background.

Students choosing the political science concentration are advised by the Department of Government and Politics. For diagnostic purposes, a student will be asked to submit Graduate Record Examination Scores.

MASTER OF ARTS IN SOCIAL SCIENCE

Concentration: Political Science

30 Semester Hours

1.	Research Area PSC 500—Methods and Materials of Research in Political Science is required plus either PSC 550—Seminar in Political Science or PSC 600—Research Report	5-6 s.h.
2.	Political Science Electives Selected under advisement	9-12 s.h.
3.	Electives from offerings of at least two other departments of School of Social and Behavioral Science.	12 s.h.
4.	Cognate area Elected from any school in the college	0-3 s.h.

MASTER OF EDUCATION IN SOCIAL SCIENCE

Concentration: Political Science

34 Semester Hours

1.	Professional Education Requirement, see page 129	10-12 s.h.
2.	Research Area PSC 500—Methods and Materials of Research in Political Science is required plus either PSC 600—Research Report or PSC 610—Thesis.	5-6 s.h.
3.	Political Science Electives Selected Under advisement	14-16 s.h.
4.	Elective Area Either academic or professional education area.	0-4 s.h.

COURSE DESCRIPTIONS

Symbol: PSC

500 Methods and Materials of Research in Political Science (3) Logic of scientific methodology. Research design construction. Stress on hypothesis development and testing, data collection, measurement problems, theory application.

502 Workshop in Pre-Collegiate Political Science Education (3) Contemporary research in political socialization as it pertains to education is examined. So are the effectiveness of citizenship-political science education and of contributions of professional and curriculum associations. Human behavior and education as factors in peaceful and violent solutions of future problems are surveyed.

510 Grass Roots Politics and the American Voter (3) Grass-roots campaign craftsmanship. Organizing and implementing electoral politics and developing political pressure groups locally.

515 Women in Politics (3) The women's movement is analyzed and surveyed both in terms of interest group politics and of political reaction to the woman as activist.

525 The American Presidency (3) Analysis of the presidency, stressing its evolution into a modern institution and the contemporary behavioral aspects of the office. Considers personality, power and campaign strategy in conjunction with presidential relations with the Executive Branch, Congress, the Courts and the media.

531 Modern Political Theory (3) Critical analysis of enduring political problems as seen primarily in the writings of theorists from Machiavelli to the present; basic concepts of political science; theories concerning the proper role of the state in society.

532 Seminar in International Relations (3) Factors which motivate the actions of nations; machinery which members of the nation-state system have evolved for effecting their various policies. Methods of diplomacy, international law, international organization.

533 The American Legislative Process (3) The legislative process in the United States including executive-legislative relationships and the changing role of the legislature in America' government.

534 American Political Parties (3) Patterns, functions and history of the American political party system at national, state and local levels. Theoretical and empirical studies of political interest groups, public opinion, voting behavior.

540 American Constitutional Law (3) Evolution of constitutional law through study of the leading decisions of the Supreme Court and their significance for the American governmental system.

541 Latin-American Culture and Politics (3) Comparative analysis of contemporary Latin-American systems. Stress of political culture, decision making, ideologies and political processes.

542 Dynamics of Public Opinion and Political Behavior (3) The political role and style of masses and elites; uses and abuses of polls, political socialization, voting behavior, campaigning and media. Understanding individual opinion formation (micro) and mass publics (macro).

544 American Public Policy (also CRJ 544) (3) Survey of literature; ecamination of approaches; discussion of concepts and issues in the field of American politics and policy processes.

548 The Communist Powers (3) Comparative study of various Communist systems, particularly the U.S.S.R. and China. Elite-mass relationships; role of Marxism-Leninims; party, economic and political structures. Secondary attention to Eastern Europe, Cuba and non-ruling parties.

549 Politics of Bureaucracy and Administrative Behavior (3) In-depth examination of the fourth branch of government. Impact of administrative apparatus (bureaucracy) on public policy formulation and implementation in the United States.

550 Seminar in Political Science (3) Selected problems in political science. Subject announced in advance of each semester. PREREQ: PSC 500.

551 The Politics of Non-Western Areas (3) Problems of nation-building, political participation and elite-mass relationships in the less developed nations. Latin American, Asian or African nations may be stressed as a case study.

552 Civil Liberties and Civil Rights (3) Analysis of constitutional rights and governmental attitudes with respect to civil liberties. Emphasis on case-study method and role playing.

560 The Politics of Revolution (3) Synthesis of research, concepts and theories of revolution. Stress on the meaning, causes, phases and ideologies of revolution. Contemporary movements emphasized.

590 Independent Studies in Political Science (1-3) Research projects, reports and readings in political science. PREREQ: approval of department chairman.

600 Research Report (2)

610 Thesis (3)

Health, Physical Education, and Recreation

Dr. Youmans, *Dean*
Dr. Cottrell, *Associate Dean*
Dr. Norris, *Associate Dean of Graduate Studies*
Mr. Funk, *Chairperson, Department of Health Education*
Dr. Woods, *Chairperson, Department of Physical Education*

PROFESSORS
Norman A. Cochran, Ed.D., *University of Maryland*
Edwin B. Cottrell, Ed.D., *Pennsylvania State University*
Ralph H. Kapilian, Ph.D., *University of Illinois*
Monita Lank, Ph.D., *University of Iowa*
John D. Lemcke, Ed.D., *Temple University*
John M. Lowe, Jr., Ed.D., *University of Toledo*
Edward N. Norris, Ed.D., *Temple University*
Neil A. Serpico, Ed.D., *University of Alabama*
Russell L. Sturzebecker, Ed.D., *Temple University*
Edwin L. Youmans, Ph.D., *University of Iowa*

ASSOCIATE PROFESSORS
John L. DeMillion, Jr., M.Ed., *University of Pittsburgh*
Phillip B. Donley, M.S., *West Virginia University; Certificate in Physical Therapy, D.T. Watson School of Physiatrics*
Joseph T. Fisher, M.S., *University of Illinois*
Walter E. Funk, M.Ed., *University of Delaware*
Melvin M. Lorback, M.S., *Pennsylvania State University*
John R. Steinmetz, Ed.D., *Temple University*
Lloyd C. Wilkinson, M.A., *Villanova University*
Richard B. Yoder, M.A., *Villanova University*
Ronald B. Woods, Ph.D., *Temple University*

The School of Health, Physical Education, and Recreation offers degree programs leading to the Master of Education or Master of Science in health or health and physical education. The Master of Education enriches academic preparation for teaching in the public schools and/or first-level employment in the various professions related to health or health and physical education. The Master of Science is designed primarily to meet individual needs of the graduate student who wishes to pursue graduate work beyond the master's degree or a career in research. The M.S. may also serve to prepare personnel for staff positions in education, government, and industry.

A certification program in Driver Education and Safe Living is also offered by the school.

Communicating with the School

Communications regarding the graduate program in health and physical education should be addressed to the Associate Dean for Graduate Studies, School of Health and Physical Education, West Chester State College, West Chester, Pa. 19380.

THE PROFESSOR RUSSELL L. STURZEBECKER SCHOLARSHIP

Through the generosity of Mr. John F. Unruh, the Graduate Division of the School of Health, Physical Education, and Recreation awards $100 each semester to a "worthy and needy" graduate student in health and physical education. The award, donated by Mr. Unruh who is an alumnus of West Chester State College, has been established in honor of Professor Russell L. Sturzebecker.

The applicant must be working full-time in the field of health and physical education and must be a part-time student at West Chester State College who has been admitted to graduate study for the master's degree. For further information, please contact the Associate Dean for Graduate Study, School of Health, Physical Education, and Recreation.

MASTER OF EDUCATION PROGRAM

Admission to the M.Ed. Program. In addition to meeting the basic requirements of the college, given under Admissions, applicants must present a baccalaureate degree attained in the field of health and physical education or equivalent preparation in a related field.

Admission to M.Ed. Degree Candidacy. Within the 15 semester hours of precandidacy, health major must complete HPE 600, HPE 601 and HED 622. Majors in health and physical education must complete any four of HPE 600, HPE 601, HPE 602, HED 620 or PED 681.

Requirements for the M.Ed. Degree

1. Satisfactory completion of one of the curricula shown below, with an average of 2.75 and an average of 3.00 in the respective major field.
2. Satisfactory performance on the written and/or oral comprehensive examinations.

MASTER OF SCIENCE PROGRAM

Admission to the M.S. Program. Applicants must meet the basic requirements of the college, given under Admissions, and must present a baccalaureate degree attained in their anticipated major area of health or health and physical education or equivalent preparation in a related field. They must also present the results of the Aptitude Section of the Graduate Record Examination which are to be used for diagnostic and program planning purposes.

Admission to the M.S. Degree Candidacy. Within the 15 semester hours of pre-candidacy majors in health must complete HPE 600, HPE 601, and HED 622 with a minimum quality point average for these and all other courses during pre-candidacy of 3.00. Majors in health and physical education must complete any three of HPE 600, HPE 601, HPE 602 or PED 681 with a minimum quality point average for these and all other courses taken during pre-candidacy of 3.00.

Requirements for the M.S. Degree

1. Satisfactory completion of one of the curricula shown below with an overall average of 3.00.
2. Oral defense of the thesis.
3. Satisfactory performance on the written and/or oral oral comprehensive examinations.

MASTER OF EDUCATION IN HEALTH

34 Semester Hours

The M.Ed. Program is composed of a required area of 14 semester hours which includes HPE 600, HPE 601, HPE 606, HPE 607, HED 622 and Educational Foundations (EDF 510). In addition there is a selected required area in which the student elects three courses (9 semester hours) under advisement from among HED 520, HED 521, HED 522, HED 523, HED 620, HED 621, HED 623, and HED 624. The remaining 11 semester hours are free electives to be taken under advisement.

The research project consists of two semesters (HPE 606 and HPE 607) which are taken following the successful completion of Methods and Materials of Research in Health, Physical Education and Recreation (HPE 600).

MASTER OF SCIENCE IN HEALTH

30 Semester Hours

The M.S. program is composed of a required area of 14 semester hours which includes HPE 600, HPE 601, HPE 608, HPE 610, and HED 622. In addition there is a selected required area in which the student elects two courses (6 semester hours) under advisement from among HED 520, HED 521, HED 522, HED 523, HED 524, HED 620, HED 621, HED 623 and HED 624. The remaining 10 semester hours are free electives to be taken under advisement.

Successful completion of Methods and Materials of Research in Health, Physical Education and Recreation (HPE 600) is a prerequisite for Thesis

Seminar (HPE 608). The thesis proposal must be formally approved within the Thesis Seminar (HPE 608) before the student may register for thesis (HPE 610).

MASTER OF EDUCATION IN HEALTH AND PHYSICAL EDUCATION

34 Semester Hours

The M.Ed. program is composed of a required area of 20 semester hours, including a research project and an elective area of 14 hours planned under advisement. Required courses are Educational Foundations (EDF 510) and HPE 600, 601, 602, PED 691 and HED 620.

The research project consists of two seminars (HPE 606 and 607) which are taken following the successful completion of Methods and Materials of Research in Health, Physical Education, and Recreation (HPE 600).

MASTER OF SCIENCE IN HEALTH AND PHYSICAL EDUCATION

30 Semester Hours

The Master of Science is attained through successful completion of an area of concentration, a component of electives, and the thesis. Required for the concentration are HPE 600, 601, 602 and PED 681. Before undertaking work on the thesis (HPE 610) the candidate must complete a thesis seminar (HPE 608). The elective area is developed under advisement and must include 7-10 credits produced from the school's curriculum in either the scientific area or the social and cultural areas. The remaining 3-6 credits should be used to fortify the student's individualized program, and, with the permission of the associate dean for graduate studies, may be selected from related fields.

CERTIFICATION PROGRAM IN DRIVER EDUCATION AND SAFE LIVING

(Highway Safety and General Safety Education)
Richard B. Yoder, Coordinator

A teacher's certificate may be extended to include education for safe living (highway safety and general safety education) by completing 12 semester hours of course work in the School of Health, Physical Education and Recreation. Six of these hours must be met by History and Philosophy of Saftey Education and Principles of Accident Prevention (PED 660) and Seminar in the Four-Phase Program of Driver Education (PED 561). The remaining two courses are chosen, under advisement by the coordinator, from PED 661, 662, 663 and 560.

COURSE DESCRIPTIONS

HEALTH AND PHYSICAL EDUCATION

Symbol: HPE

500 Contemporary Problems in Health, Physical Education, and Recreation (3) Problems in teaching health, physical education, and recreation; in-service aspects; factors and variables which influences solutions of these problems.

600 Methods and Materials of Research in Health and Physical Education (2) Techniques of research in education applied to the field of health, physical education, and recreation.

601 Techniques of Measurements and Evaluation in Health and Physical Education (3) Statistical and evaluative procedures and their application to health, physical education, and recreation.

602 Historical and Philosophical Bases for Health and Physical Education (3) Past and contemporary philosophies, principles, and objectives in health, physical education, and recreation; current trends.

603 Seminar in Professional Literature in Health, Physical Education, and Recreation (3) Review of current professional literature in the area and its related fields. Emphasis on the application of the literature to teaching and research.

604 Administration and Supervisory Practices In Health, Physical Education, Recreation, and Athletics (3) Nature of the positions of directors or supervisors of physical education, recreation, and athletics. Job specifications; operational principles and procedures.

605 Curriculum in Health and Physical Education (3) Trends in health and physical education curricula at the elementary, secondary, and college levels. Surveys, reports, and analyses of curriculum practices.

606 Research Project Seminar I (2) The M.Ed. candidates selects a problem for a research report, reviews the literature, develops procedures, and collects appropriate data. Students are expected to complete the first three chapters of the research report during Seminar I, and will continue to register for this course each semester or summer session until this requirement is met. They then register for Seminar II.

607 Research Project Seminar II (1) M.Ed. candidates are expected to complete their research reports in this seminar (see HPE 606). They continue to register for the seminar until the report is completed.

608 Thesis Seminar (2) A course for the M.S. candidate, who selects a topic, reviews the literature, develops procedures, and prepares a proposal acceptable to the thesis committee. Candidates continue to register for the seminar until they have met requirements. They then register for HPE 610.

609 Independent Study and Special Projects (1-3) Research projects, seminar papers, reports of special conferences, and reading in health and physical education. PREREQ: approval of associate dean for graduate studies.

610 Thesis (4) Undertaken upon completion of HPE 608. If the thesis is not completed in the first semester the student must register again and thereafter in 593 until the thesis has been accepted by the committee.

HEALTH EDUCATION

Symbol: HED

520 Scientific Bases for Health (3) Past and recent scientific developments in selected physiological health problems. Analysis of research findings which contribute to basic content in health education. The practical application of these findings through health behavior.

521 Sociological Bases for Health (3) Past and recent scientific developments in selected sociological health problems. Analysis of research findings in the areas of social and mental health; the place of these findings in the basic content in health education and their practical application through group behavior.

522 Gerontology (3) In depth study of the mental, physiological, emotional and social aspects of aging. The role society assigns to the aged. Improving the lot of the aged.

523 Consumer Education (3) Consumer related problems of the individual and society. Consumerism, cost and delivery of health services and the effect on individual and societal health. Consumerism and the law.

524 Problems in Industrial Health (3) Basic social and industrial health problems. Addictives, chronic and communicable diseases, mental health, family problems, first aid and public health law as they apply to industry.

620 School Health Problems (3) In-service training in school health problems, using the case technique method and a variety of materials, methods, and resources.

621 Human Sexuality in a Changing Society (3) Problems of sexual organs such as dysfunction. Changing sexual attitudes and behavior of individuals, families, and society. Commercial sex, misinformation, sex and the law, population control. Sex education for home and school.

622 Principles of Curriculum and Instruction for Health Education (3) Alternatives for viewing and reviewing instructional programs. Existing rationales. Conception of curricula. Developing effective curriculum.

623 Addictive Diseases (3) Designed to assist the student and in-service teacher in developing knowledge and insight into the addictive diseases (alcohol, drugs, tobacco). Utilization of resource personnel.

PHYSICAL EDUCATION

Symbol: PED

550 Elementary Physical Education Workshop (3) Orientation for the teaching of elementary physical education. Principles and practices; appropriate activities for various grade levels.

551 Elementary Physical Education Recreation Music Workshop (2) Leading and teaching rhythmic activities and singing in elementary physical education and recreation. Fundamental level. Instructional programmed music textbook; piano and guitar chords. Creating and teaching recreational and singing games.

552 Learning on The Move (3) Movement education and perceptual motor theory. Activities to guide children to maximal development potential.

560 Seminar in Motorcycle Safety Education (3) Curricular design, administration, and operational techniques of motorcycle safety programs. Laboratory experiences.

561 Seminar in the Four-Phase Program of Driver Education (3) In-service experience for driver-education teachers in classroom, BTW, multi-car method, and simulation.

570 School and Community Recreation (3) Community recreation with emphasis on the role of the school in the total program.

571 Outdoor Education Workshop (2) Principles, procedures, and skills for conducting outdoor education programs. Seminars, lectures, field trips, and practical participation in outdoor education skills.

577 Summer Dance Workshop/Effective Projection In Theater Dance (1) Experience in dance as a performing art: lighting, set design, costume. Original compositions are staged. The workshop combines various dance techniques.

580 Sports Psychology (3) Behavior of individuals participating in play, games and sports. Why people behave the way they do in athletics and physical activity. Risk-taking personality and behavior under stress.

581 Adapted Physical Education (3) Techniques for a program of adapted physical education in the public school. Application of activities to benefit the child with a temporary or permanent disability.

582 Modern Principles of Athletic Training (3) A course for the physical educator and/or coach. Injuries which occur in class, practice, and game situations; preventive taping and wrapping; immediate first-aid procedures; professional relations with the medical profession.

584 Instrumentation (2) Experience in measurement involving operation of laboratory equipment for research in physical education.

585 Mechanical Analysis of Motor Skills (3) Fundamental principles of mechanics, applied to teaching physical education and athletic activities.

586 The Olympic Games—Their Influences on the Ancient and Contemporary Worlds (3) Ancient and modern games and their historical and cultural significance. Sociological and political implications of the modern games.

650 The Child and Physical Education (3) Contributions of physical education to the child's physical, social, emotional, and intellectual growth and to his developmental needs and interests. The influences of various activities on growth and development.

660 History and Philosophy of Safety Education and Principles of Accident Prevention (3) The safety movement in the United States and other countries. Place of safety education in modern living; philosophies of safety-education leaders; accident causation and prevention; their research implications. Background for administering school, civil defense, and emergency safety programs.

661 Contemporary Practices and Program Evaluation in Safety Education (3) Current practices, evaluation of programs, and research of current literature in safety education. Techniques for selecting, constructing, and utilizing instruments for evaluating safety-education programs. Problem-solving projects.

662 Problems in Traffic and Driver Education (3) Contemporary curriculum and current practices in driver and traffic education, enforcement of traffic laws and regulations, engineering problems. Problem-solving projects.

663 Psychology in Safety Education and Accident Prevention (3) Effects of unconscious determinism, habits, attitudes, individual adjustment, motivation, and personality on accident causation. Research implications explored.

680 Scientific Principles of Coaching (3) Recent trends in theories and techniques of teaching sports. Mechanical principles of efficient movement. Research related to competitive performance. Specialists serve as guest panelists.

681 Scientific Bases for Physical Education (3) Scientific data related to physical education activitites. Scientific approaches to motor learning and development of skill. PREREQ: anatomy, physiology, applied physiology, or equivalents.

682 Biodynamics of Human Performance (3) Physiology of the active, vital organism. Scientific findings concerning human performance, especially under stress and accompanying physiological adjustments.

683 Comparative Physical Educatıcn (3) Comparative study of programs outside the United States. Current philosophies, principles, and practices.

684 Sport and Society (3) Using a historical context, a model of the role of sport in a variety of societal environments will be constructed. Emphasis will be placed on the view of sport as a form of human expression that is reflective of the current value structure or a particular society.

SERVICE COURSES

The following courses are open to students in all curricula, with no prerequisite in health and/or physical education required:

HPE 605; HED 522, 620; PED 550, 551, 552, 560, 561, 570, 571, 577, 580, 581, 584, 585; PED 650, 660, 661, 662, 663, 680, 682.

History

Dr. Carlson, *Chairperson*
Dr. Stuart, *Coordinator for the Graduate Program in History*

PROFESSORS

Robert E. Carlson, Ph.D., *University of Pittsburgh*
Florence Joseph Crowley, Ph.D., *University of Florida*
Claude R. Foster, Ph.D., *University of Pennsylvania*
Frank Fox, Ph.D., *University of Delaware*
Clifford H. Harding, Ph.D., *New York University*
Patricia C. Johnson, Ph.D., *University of Rochester*
Donn C. Riley, Ph.D., *St. Louis University*
Harry G. Schalck, Ph.D., *Clark University*
Anne Sessa, Ph.D., *University of Delaware*
Norbert C. Soldon, Ph.D., *University of Delaware*
Charles H. Stuart, Ph.D., *Boston University*
Jane B. Swan, Ph.D., *University of Pennsylvania*
John J. Turner, Jr., Ph.D., *Columbia University*
Robert J. Young, Ph.D., *University of Pennsylvania*

ASSOCIATE PROFESSORS

H. James Burgwyn, Ph.D., *University of Pittsburgh*
Raymond A. Doyle, B.S., *West Chester State College*
Paul G. O'Grady, Ph.D., *University of Delaware*
Harold E. Shaffer, Litt, M., *University of Pittsburgh*
Richard J. Webster, A.M., *University of Pennsylvania*

ASSISTANT PROFESSORS

Thomas J. Heston, Ph.D., *Case Western Reserve University*
W. Bennett Peters, Ph.D., *University of California at Santa Barbara*

The Department of History offers three degrees: the Master of Arts in history; the Master of Arts in social science with a concentration in history; and, in cooperation with the School of Education, the Master of Education in social science with a concentration in history.

The Master of Arts degree in history provides a sound foundation for study leading to the doctorate in history as well as a background of knowledge for teachers in secondary schools and institutions of higher learning and for persons employed in industry and government. Study for the degree also enriches the cultural background of students and helps them to evaluate present events in light of the past.

The M.A. in history may be achieved by completing either a thesis or non-thesis program. The candidate in the thesis program must pass a reading-proficiency test in either French or German. The candidate, with the department chairperson's approval, may substitute another language or may demonstrate competency in statistics. In the non-thesis program, the candidates does not fulfill the language requirement but takes three seminars and presents a research paper in each.

The Master of Arts in social science is particularly relevant for teachers who wish to strengthen their subject-matter knowledge in more than one academic discipline. The program is also appropriate for persons employed in government or industry or for those who wish to enrich their cultural background. Those who select history as their concentration in this interdisciplinary program are advised by the Department of History.

The Master of Education in social science (history concentration) provides in-service teachers with additional professional-education courses as well as with an opportunity to enlarge their understanding of the historical past.

In all three programs the Graduate Record Examinations (morning and afternoon) are required for admission to degree candidacy, which should occur upon completion of from 12 to 18 semester hours of graduate work.

Degree candidates must achieve at least a raw score of 1000 in the combined verbal and advanced history portions of the Graduate Record Examinations or a score of no less than the 40th percentile in the advanced history portion.

MASTER OF ARTS IN HISTORY

30 Semester Hours

THESIS OPTION

1.	Major area of concentration (American or European) (must include two seminars)	12 s.h.
2.	Minor area of concentration (either the area not chosen above or the Third World) (must include one seminar)	6 s.h.
4.	HIS 500 **(Methods and Materials of Research)**	3 s.h.

4. HIS 691 **(Thesis)** 6 s.h.
5. Elective 3 s.h.

NON-THESIS OPTION

1. Major area of concentration (American or European) (must include two seminars) 18 s.h.
2. Minor area of concentration (either the area not chosen above or the Third World) (must include one seminar) 9 s.h.
3. HIS 500 **(Methods and Materials of Research)** 3 s.h.

MASTER OF ARTS IN SOCIAL SCIENCE

Concentration: History

30 Semester Hours

1. History courses (under advisement) 9 s.h.
2. Social Science courses (from at least two departments other than History in the School of Social and Behavioral Sciences) 12 s.h.
3. HIS 500 **(Methods and Materials of Research)** 3 s.h.
4. HIS 650, 651, or 652 **(Seminar)** 3 s.h.
5. Elective (from any department in the college) 3 s.h.

MASTER OF EDUCATION IN SOCIAL SCIENCE

Concentration: History

34 Semester Hours

1. Professional education requirements (See page 129) School of Education) 10-12 s.h.
2. History courses (under advisement) 15-18 s.h.
3. HIS 500 **(Methods and Materials of Research)** 3 s.h.
4. HIS 650, 651, or 652 **(Seminar)** 3 s.h.
5. Electives (Professional education or academic) 0-4 s.h.

COURSE DESCRIPTIONS

See also Social Science (SSC) following History

Symbol: HIS

500 Methods and Materials of Research in History (3) Basic techniques and procedures in research; major types of research and methods for locating, evaluating, and interpreting evidence. The student develops a tentative outline, bibliography, and summary of an investigative procedure. Required of all degree-program students.

501 Studies in the History and Culture of South Asia (3) The Indian sub-continent's dominant political, cultural, and economic institutions. Features which contribute to an understanding of modern India and Pakistan.

505 Studies in the History and Culture of East Asia (3) The traditional basis for modern Chinese, Japanese, and Korean society. The interaction between European and Asian cultures and resulting changes in East Asia.

509 Contemporary History of the Middle East (3) Recent history of major Middle Eastern societies; Iran and the oil situation; Israel and the Palestine question; conflicting cultures.

511 Studies in the History and Culture of Emerging Africa (3) Emergence of modern African nationalism against the background of traditional African society and the legacy of European colonialism.

512 Independent Black Africa (3) The post-war experience of Sub-Saharan Africa viewed in the light of the end of European colonial administration and the growth of an independent African society.

515 The Cultural and Intellectual History of Latin America (3) Pre-Columbian art and thought, scholasticism, mercantilism, the Great Debate, Baroque architecture, Enlightenment, conservatism, liberalism, Romanticism, Modernism, Positivism, Jose Enrique Rodo, Aprismo, Mexican muralists, novel of social protest, existentialism, and music. Lineaments of the Latin-American mind.

516 Modern Mexico (3) Mexico during the 19th- and 20th-centuries; stress upon the dramatic transformation of Mexico "from backwardness to modernity in the short period of a century and a half."

530 Problems in Medieval Civilization (3) Rise and fall of the Byzantine Empire, conquests of the Arabs and Turks, the crusades for the recovery of the Holy Land; the religious orders and the universal aspirations of the Papacy.

531 The Renaissance (3) Political, social, and cultural transitions in Italy and Northern Europe, 1350-1550.

532 The Reformation (3) Major and minor Protestant leaders and their movements; effects on the evolving nation-states; the Church of Rome's response; Wars of Religion and Treaty of Westphalia; the Scientific Revolution.

533 Dynastic Europe: 1648-1789 (3) The absolute dynastic monarchy as best exemplified by France, Prussia, and Russia; the middle class challenge as typified by the English experience; the Enlightenment and the New Science; capitalism; colonialism, and wars of empire.

534 The French Revolution and the Napoleonic Era: 1789-1815 (3) Causes of the French Revolution, failure of absolutims, Reign of Terror, the Directory; rise of Napoleon Bonaparte and his contribution to the Revolution; the Empire—its rise and collapse; Congress of Vienna.

535 Nationalism and Democracy: 1815-1914 (3) Aftermath and effect of the French Revolutionary era; events brought on by the growth of nationalism and democracy; development of the industrial revolution. Roots of the First World War.

536 Europe Since 1914 (3) Twentieth century Europe, with emphasis on causes of World War I; Europe between World War I and World War II; problems of contemporary Europe.

540 The Evolution of Modern Russia (3) A cultural approach to the historical development of Russia from the foundation of Kiev to the Revolution of 1917. Emphasis is on Russia's political and aesthetic uniqueness.

541 Tudor and Stuart England (3) Social, cultural, religious, political, and economic developments during the Tudor and Stuart reigns; building a strong Tudor monarchy; the English Reformation; Stuart Absolutism; Puritan Revolution, Civil War and the Commonwealth; the beginning of Empire; the Restoration, Glorious Revolution, and growth of English constitutionalism.

550 Colonial America: 1607-1763 (3) Development of the 13 mainland colonies of Anglo-America from their settlement to mid-18th century. Emphasis on a conceptual analysis of specific events and problems.

551 Revolutionary America: 1763-1789 (3) American development from the mid-18th century to the framing of the Constitution, with emphasis on the causes of the American Revolution and the evolution of American institutions and ideas throughout the period.

553 The Rise of the New Nation: 1789-1850 (3) A historiographical approach involving interpretations of the foundations and development of the Federalist Party, emergence of Jeffersonian Democracy, evolution of Jacksonian Democracy, and events of the Middle Period leading to the decade of controversy.

554 Civil War and Reconstruction: 1850-1877 (3) The War and its aftermath as the great watershed of United States national history. Emphasis on the conflicting interpretations of the causes, nature, and effects of the Civil War.

555 Emergence of Modern America: 1876-1923 (3) Rise of industry, labor, immigration, and new cultural patterns; emergence of new political alignments, rise of imperialism, development of liberalism and reform; America's struggle for neutrality and her participation in World War I.

556 America Since 1919 (3) The impact of urbanization and industrialization upon society, politics, and economics; the problems of wars—declared and undeclared—and the various policies for peace.

557 Problems in American Constitutional Development (3) Selected problems in the development of American constitutional government. The progressive adaptation of the law to a changing social and economic order. Conflicts such as nationalism versus states' rights and vested rights versus police power.

558 Recent American Diplomatic History (3) American foreign policy in Europe, Asia, Latin America and the Middle East from 1945 to the present. Objectives sought by the United States and the political, military, economic, and social policies pursued; role of the United States in the future of underdeveloped countries.

559 American Urban History (3) Research methods and approaches for studying the history of cities in America. Emphasis on quantitative analysis, including studies of urban population, social mobility, and voting patterns.

560 American Labor Since 1865 (3) American laborers and labor organizations in the past hundred years; industrialization, immigration, and labor; women, children, and minorities in labor organizations; political parties, radical groups, and violence as factors in labor history; economic conditions and labor; Big Labor.

561 The Indian in America's Past (3) The dispossession of the American Indian; land seizures, wars, and treaties, cultural contact, customs, mores, economic and religious life of the Indian; assimilation and preservation of Indian culture.

650 Seminar in American History (3) Selected problems in American history. Subject announced in advance of each semester. PREREQ: HIS 500, two courses in American history.

651 Seminar in European History (3) Selected problems in European history. Subject announced in advance of each semester. PREREQ: HIS 500, two courses in European history.

652 Seminar in History of the Non-Western World (3) Selected problems in non-western world history. Subject announced in advance of each semester. PREREQ: HIS 500, two courses in non-western world history.

660 Field Studies in History (3-6) A fully supervised learning experience, usually a tour, designed to expose students to the culture, artifacts, and research facilities of a given country or area.

690 Independent Studies in History (1-3) Research projects, reports, and readings in history. PREREQ: approval of department chairperson.

691 Thesis (6)

SOCIAL SCIENCE

SSC 502 Methods and Materials for Teaching Social Studies (3-6) Current practices and procedures; organization and planning; the use of classroom, library, and curriculum materials; testing, measurements, and evaluation; bibliographical sources for both teachers and students.

SSC 580 Ethnic Cultures Institute (3) Jointly sponsored by the Schools of Arts and Letters and Social and Behavioral Sciences, the institute considers the contributions of ethnic groups to the culture of the United States. Designated primarily for teachers, community action personnel, and students who wish to increase knowledge and skills for developing meaningful intergroup relationships and improving classroom instruction. Educators and community leaders take part.

Instructional Media Education

Dr. Weagley, *Chairperson*

PROFESSORS

Richard L. Strayer, Ed.D., *Temple University*
Richard P. Weagley, Ed.D., *Pennsylvania State University*

ASSOCIATE PROFESSORS

David L. Redmond, M.S., *Syracuse University*
Joseph M. Spiecker, Ed.M., *Temple University*

ASSISTANT PROFESSOR

Jay P. Steinmetz, M.Ed., *West Chester State College*

The Department of Instructional Media Education offers three programs in educational media.

Master of Education

This degree is offered to candidates who posses an Instructional Level I or Instructional Level II certificate, and prepares them for positions as instructional media coordinators in elementary and secondary schools and for instructional and administrative positions in colleges.

Master of Science

This is a program designed for the many fields outside education where highly skilled personnel in instructional media are in growing demand. These fields encompass business, industry, religious organizations, and government. Unlike the M.Ed. program, the M.S. program does not require an undergraduate background in teaching; nor does it lead to certification.

Educational Media Specialist Certification

Certification, which may be earned by completing the Master of Education degree program, may also be achieved with the completion of 24 credits in educational media in a non-degree program. The certificate is valid for obtaining positions in instructional media in the public schools of Pennsylvania.

MASTER OF EDUCATION

Students admitted to the master's degree program are required to submit scores for the Graduate Record Examination Aptitude Test and/or the Miller Analogies Test during their first session (fall, spring, or summer) of enrollment.

Admission to Degree Candidacy. Upon completion of 15 semester hours, application for degree candidacy may be made by students who meet the following requirements:

1. A 3.00 average in courses in educational media.
2. A 2.75 average in over-all graduate work.
3. Successful performance on the Graduate Record Examination and/or the Miller Analogies Test.
4. Satisfactory performance on a proficiency examination in the field of educational media.

The Comprehensive Examination. Admission to the comprehensive examination is gained upon admission to degree candidacy, completion of all required courses and 28 semester hours of course work.

Degree Requirement. The candidate must perform satisfactorily on the comprehensive examination and satisfactorily complete the curriculum shown below.

MASTER OF EDUCATION IN EDUCATIONAL MEDIA

34 Semester Hours

Required Courses: EDF 500 and EDF 510—5 semester hours
Area of Concentration Requirements: EDM 502, 511, 519, 520, 522, 555, 560, 590—23 semester hours

Area of Concentration Electives: 3-6 semester hours chosen under advisement from offerings in Instructional Media

Free Electives: 0-2 semester hours (under advisement)

MASTER OF SCIENCE

Students admitted to this program are required to submit a score for the Miller Analogies Test during the first session of enrollment.

Admission to Degree Candidacy. Before completion of 15 semester hours, application for degree candidacy is made by students who meet the following requirements:

1. A 3.00 average in course work.
2. Successful performance on the Miller Analogies Test.
3. Satisfactory performance on a proficiency examination in educational media.
4. Successful completion of a project in the area of concentration.

The Comprehensive Examination. Admission to the comprehensive examination is gained upon admission to degree candidacy, completion of all required courses, and 28 semester hours of work.

Degree Requirements
1. Satisfactory completion of the Master of Science curriculum and an overall average of 3.00.
2. Satisfactory performance on the written comprehensive examination.
3. Successful completion of a project demonstrating professionalism in the candidate's area of concentration.

MASTER OF SCIENCE IN EDUCATIONAL MEDIA

34 Semester Hours

Required Courses: EDM 502, 520, 522, 560, 563, 591—17 semester hours

Concentration Area: Each student must pursue a concentration of 9 semester hours in one of four following areas.
A. Photography. EDM 513, 525, 526
B. Cinematography. Three courses chosen from EDM 505, 529, 530, 531
C. Television. EDM 533, 534, 535
D. Research in Communications. EDF 500, RES 520, EDM 595, EDM 600

Electives: 8 semester hours chosen under advisement. The candidate is required to show competence in, or to take a course in each of the above three areas not chosen for his concentration.

EDUCATIONAL MEDIA SPECIALIST CERTIFICATION

24 Semester Hours

In order to obtain this certificate the student must:

1. Hold a Pennsylvania certificate valid for teaching in the elementary or secondary schools.

2. Complete the state-approved curriculum, which consists of EDM 502, 519, 520, 522, 555, 560, 590, and 4 semester hours of electives taken under advisement.
3. Achieve an overall average of 2.75 in the program.
4. Perform successully on a final proficiency examination.

COURSE DESCRIPTIONS

Symbol: EDM

501 Orientation to Educational Media (3) Survey of modern educational media with opportunities for laboratory activities.

502 Selection and Effective Utilization of Educational Media (3) Evaluates diverse types of educational media and explores means of integrating these media into the instructional situation.

505 The Motion Picture in Education (3) History and development of the motion picture, with emphasis on educational motion pictures. Cinematographic techniques; the impact of 35 mm., 16mm., and 8 mm.; the single-concept instructional film. An evaluation of diverse types of films as they apply to types of learning.

508 Instructional Materials in the Elementary School Curriculum (3) Practice in techniques of using and evaluating communications media in the classroom. Correlating audio-visual materials and techniques with the elementary program.

511 Programmed Instruction (3) Program writing is stressed in this workshop type course covering the history and psychology of programmed instruction. Trends in programmed instruction; program evaluation; programming techniques. PREREQ: general psychology.

513 Producing Auto-Instructional Programs (3) Techniques in the production of slide-tape presentations, audio-tape presentations, 8 mm. magnetic sound film lessons, and other self-teaching sequences. PREREQ: EDM 511, 525.

519 Library Science (3) Organization and administration of libraries, with emphasis on instructional materials. Selecting, cataloguing, and evaluating instructional materials.

520 Designing Instructional Materials (3) Techniques of lettering and design for display and projection materials.

522 Production of Non-Projected and Projected Materials (3) Basic local production techniques including copying, duplicating, mounting, displaying, and evaluating graphics and flat pictures. Investigates techniques for designing and locally producing projectuals; evaluates commercial techniques of transparency production. PREREQ: EDM 520.

524 Advanced Projectual Production (3) Design and production of projectuals using technamation, color imbibition, photo-copy, and advanced diazo techniques. Investigation of commercial production of transparencies. PREREQ: EDM 522.

525 Photography for Teachers (3) A basic laboratory course in the taking and processing of still pictures.

526 Intermediate Photography (3) A workshop course for those who have had a basic photography course or previous photographic experience. This course will stress an aesthetic creative approach to black and white and color photography with small format cameras and will involve advanced techniques of exposure, lighting, composition, macrophotography and film and print processing.

528 Advanced Still Photography (3) Lecture and laboratory experiences in the use of large-format cameras. PREREQ: EDM 525.

529 Instructional Use of the 8 mm. Motion Picture Camera (3) Prepares teachers to produce and/or guide students in the production of 8 mm. films.

530 Cinematography I (3) Scripting and shooting 16 mm. motion pictures.

531 Cinematography II (3) Editing and sound recording on 16 mm. films. PREREQ: EDM 530.

533 Television in Education (3) Development of educational television and the instructional use of commercial, educational, and closed-circuit television in the classroom.

534 Instructional Television Production I (3) Planning, writing, producing, and evaluating instructional television productions. PREREQ: EDM 533.

535 Instructional Television Production II (3) Production of telecasts in selected subject areas with emphasis on videotape recording. PREREQ: EDM 534.

555 Learning Theories Related to Educational Media (3) The role of perception in sensory experience; inner cognitive processes in relation to maturation, goals and drives, types of learning, and environment. Psychological processes are related to the learning resources provided by educational media.

563 Field Study in Educational Media (3) A scheduled group or individual tour, foreign or domestic, in which students investigate notable installations or projects in educational media.

565 Seminar in Educational Media (2) Explores current problems in the use of instructional media. PREREQ: 12 graduate credits in educational media.

590 Internship Program in Educational Media (2) Practicum in supervising and implementing instructional services. PREREQ: 18 credits in educational media.

591 Seminar in Research in Communications (2) Basic elements of communication theory, applied to audio-visual education. Research in audio-visual communication is analyzed. PREREQ: 18 credits in educational media.

595 Independent Studies in Instructional Media (1-3)

600 Research Report (2)

Linguistics

(Interdepartmental Area)

Dr. Falgie and Dr. Smith, *Coordinators*

LINGUISTICS GROUP

Diane O. Casagrande *(Speech and Theatre)*
W. Stephen Croddy *(Philosophy)*
Joseph Falgie, Jr. *(English)*
John T. Kelly *(English)*
Benjamin Nunez *(Foreign Languages)*
Willie E. Page, Jr. *(English)*
Philip D. Smith, Jr. *(Foreign Languages)*

Although West Chester presently offers no degree in linguistics, students interested in developing a concentration in this area may elect courses from the following list. For additional information consult one of the coordinators.

COURSE DESCRIPTIONS

Symbol: LIN

501 Introduction to Linguistics (3) Basic concepts of language description, classification, change, reconstruction, dialectology, and sociolinguistics.

503 Phonology and Morphology (3) Phonetics, phonemics, morphophonemics, and the morphological composition of words.

504 Syntax (3) A comparative study of the various modern approaches to the study of grammar. PREREQ: LIN 501 or ENG 575.

505 Transformational Grammar (3) Basic concepts of transformational theory and their application in teaching. PREREQ: LIN 501 or ENG 575.

506 Meaning in Language (also PHI 506) (3) See PHI 506.

509 Contrastive Analysis (3) Contrastive analysis of the phonological, grammatical, lexical, and cultural features of languages. Interferences in second-language learning situations. PREREQ: LIN 501 or LIN 503.

512 Descriptive Linguistics (3) Analysis of the phonemic, morphological, and syntactic features of typologically divergent languages. Procedures for eliciting linguistically relevant data about a language from a native speaker. PREREQ: LIN 503.

515 General Semantics (also SPC 515) (3) See SPC 515.

523 Philosophy of Language (also PHI 523) (3) See PHI 523.

540 Sociolinguistics (also SOC 540) (3) The study of language in its social context: the ethnography of communication; language and society, social classes, ethnic groups, politics, sex, and education. PREREQ: LIN 501 or permission of instructor.

555 Psycholinguistics (also PSY 555) (3) An introduction to the study of the relationships between language and thought. Models of language, communication theory, and learning theory. Major emphasis on natural language development and bilingualism.

580 Language and Culture (also ANT 580) (3) Language as an aspect of culture; linguistic-perceptual-cognitive categories; social and psychological aspects of language. PREREQ: LIN 501 or permission of instructor.

590 Independent Study (1-3)

Marine Science

As a charter member of the Marine Science Consortium, West Chester State College, along with 17 other colleges and universities, provides opportunities for field studies in marine sciences at Erie, Pennsylvania, and Wallops Island, Virginia. Undergraduate and graduate courses are given each summer in five three-week sessions. The constorium offers courses in navigation, scuba diving, geology, biology, chemistry, and physics as well as research cruises on two ocean-going vessels. Consult the School of Sciences and Mathematics about the applicability of these courses to degree programs within the school.

COURSE DESCRIPTIONS

Symbol: MSC

500 Problems in Marine Science (3) The student chooses Option A or Option B. Option A: enrollment in an approved 400-level course in marine science and completion of an approved research project. Option B: an independent research project.

520 Marine Microbiology (3) Sample collection and laboratory techniques in identification of marine microorganisms; physical nature of marine waters; their effect on microbial populations. PREREQ: general microbiology.

530 Coastal Sedimentation (3) Depositional environments. Their processes, sediments, facies. PREREQ: introductory course in sedimentation or marine geology, or consent of instructor.

540 Environmental Sciences Education (3) Field environmental education. Emphasis on coastal zones. Sources, facilities, methods, concepts.

570 Research Cruise (3) Approximately one of the three weeks is spent on board the R.V. "Annandale," researching aspects of marine science including biology, geology, marine pollution, waste disposal.

598 Topics in Marine Science (1-3) One-week survey of remote sensing techniques for study of the coastal environment. Seminars by NASA personnel in the ERTS program. PREREQ: one year of physics.

Mathematical Sciences

Mr. Milliman, *Acting Chairperson*
Dr. Mandelbaum, *Graduate Coordinator*

PROFESSORS

Richard G. Branton, Ph.D., *University of Pennsylvania*
Albert E. Filano, Ph.D., *Pennsylvania State University*
Frank Grosshans, Ph.D., *University of Chicago*
Sebastian S. Koh, Ph.D., *University of California*
James E. L'heureux, Ph.D., *Louisiana State University*
Eli M. Mandelbaum, Ph.D., *University of Pennsylvania*
Michael Montemuro, Ed.D., *Temple University*

ASSOCIATE PROFESSORS

Thomas Egan, Ed.D., *University of Pennsylvania*
Wesley E. Fasnacht, M.S., *State University of New York at Buffalo*
John J. Kerrigan, D.Ed., *Temple University*
Frank E. Milliman, A.M., *Columbia University*
Joseph G. Moser, M.S., *Purdue University*
John W. Weaver, Ph.D., *Johns Hopkins University*
Sol Weiss, M.A., *Columbia University*

ASSISTANT PROFESSORS

James D. Fabrey, Ph.D., *Massachusetts Institute of Technology*
Ronnie L. Morgan, Ph.D., *University of Missouri*

The Department of Mathematical Sciences offers the Master of Arts degree with options in pure mathematics, mathematics education, and applied computer science.

The first option is for students interested in furthering their mathematical background and provides the foundation for continued work in mathematics leading to the Ph.D. degree in pure mathematics.

The second option is primarily directed to teachers of mathematics who wish to strengthen their background in mathematics and mathematics education; in addition it provides the foundation for the Doctor of Arts or the Ph.D. degree in mathematics education.

The last option is primarily for secondary mathematics or science teachers, preparing them for computer technology and its applications. Students with backgrounds other than teaching may tailor their programs to satisfy their particular needs and professional goals.

The department also cooperates with the School of Education in offering the Master of Education degree in mathematics.

Admission to the M.A. Program

In addition to meeting the basic admission requirements of the college, applicants—prior to enrollment—must schedule an interview with the department chairperson. Applicants must present a minimum of 30 semester hours of mathematics including a full treatment of calculus and at least one advanced undergraduate course in modern algebra and one in advanced calculus. Deficiencies in these areas may be removed by successfully completing MAT 512—Modern Algebra and/or MAT 541—Advanced Calculus. At the discretion of the department, Graduate Record Examinations may be required.

Admission to the M.Ed. Program

In addition to meeting the basic admission requirements of the college, applicants—prior to enrollment—must schedule an interview with the department chairperson. Applicants must present a minimum of 24 semester hours of mathematics including a full treatment of calculus and at least one advanced undergraduate course in modern algebra or advanced calculus. Deficiencies in these areas may be removed by successfully completing MAT 512—Modern Algebra or MAT 541—Advanced Calculus.

Requirements for The M.A. and M.Ed. Degrees

In addition to completing the course requirements shown below, candidates for either degree must pass a comprehensive oral examination.

MASTER OF ARTS IN MATHEMATICS

30 Semester Hours

Core Courses: Candidates in all options are required to take 9 semester hours including MAT 515, 545, and either MAT 575 or an approved course in statistics or applied mathematics.

Required Courses 12 semester hours

A. Pure Mathematics Option: MAT 516, 535, 546, 575 (or 576 if 575 is selected for Core).
B. Mathematics Education Option: MTE 504, 507, 508, and one of the following: MTE 505, 551, or 552.

C. Applied Computer Science Option: as specified by student's graduate committee chairman depending on student's background and experience.

Electives (9 semester hours): Chosen under advisement from the course offerings below bearing the prefix MAT or STA except MAT 503, 512, and 541.

Modifications in this program may be made with the approval of the department chairperson.

MASTER OF EDUCATION IN MATHEMATICS

34 Semester Hours

The candidate must satisfy the requirements as outlined on page 129.

In the area of concentration (20-22 semester hours) MAT 515, 545, MTE 507, and either MTE 508 or 509 are required. Electives (8-10 semester hours) are chosen under advisement from the course offerings below bearing the prefix MAT or STA.

Modifications in the area of concentration may be made with the approval of the department chairperson.

COURSE DESCRIPTIONS

COMPUTER SCIENCE

Symbol: CSC

501 Introduction to Computers (3) Prepares the student to program and use the computer for his various needs. Several computers and programming languages are considered. Primarily for non-mathematics majors.

504 Systems Design II (3) Continuation of CSC 503. PREREQ: CSC 503.

505 Introduction to Computer Science (3) Introduction of the basic concepts of programming and digital computer usage. Emphasis is on the manipulation of data. The student solves many types of computing problems. PREREQ: two years of high school algebra.

506 Computer Organization & Programming (3) Analysis of basic computer organization with respect to programming. An in-depth study of a specific computer's hardware and its associated assembly language is made. PREREQ: CSC 505 (or consent of instructor).

507 Algorithmic Languages I—Structured Programming (3) The COBOL language is used to study the techniques of structuring a program to assure program correctness. Suitable business applications are investigated to illustrate the benefits and power of well-structured programs. PREREQ: CSC 505 (or consent of instructor and equivalent of CSC 501).

508 Algorithmic Languages II (3) Analysis and comparison of the structure of several problem oriented languages, usually chosen from FORTRAN, APL, ALGOL, or PL/I. Additionally one of the following special purpose languages is also investigated: SNOBOL, LISP, SLIP. PREREQ: CSC 506 (or equivalent or consent of instructor).

510 Computer Programming and Numerical Methods (3) Algorithmic methods. The computer is used to solve a variety of numerical and non-numerical problems. PREREQ: CSC 501 (or equivalent) and one year of calculus.

511 Firmware (3) Study of the hardware characteristics of general purpose digital computers and related equipment with particular emphasis on microprogramming. PREREQ: CSC 508 (or equivalent).

521 Data Base Management Systems (3) Detailed study of the characteristics of generalized data management systems, including a survey of some of the systems in widespread use. Emphasis is placed on techniques for improving the interface between a manager and the information he needs to make decisions through easy-to-use generalized reporting systems. PREREQ: CSC 508 (or equivalent).

525 Systems Design (4) The student designs and implements an information system. This project involves the complete system development cycle: analysis, design, programming with documentation, implementation and fellow-up. PREREQ: CSC 521 approval by computer science committee of a detailed project proposal.

531 Operating Systems (3) Operating systems and their user characteristics are studied. Maintenance of a complex operating system with emphasis on the important trade-offs made in tuning the system. Details of core and file management, system accounting, and other user-related services. PREREQ: CSC 508 (or equivalent).

535 On-Line Computing (3) Design, implementation, and modification of information systems in an on-line environment. File management systems and data structures appropriate to real-time computing with particular emphasis on back-up and recovery techniques. PREREQ: CSC 508 (or equivalent).

536 Data Communications (3) Study of the hardware and software characteristics of equipment used to provide communication between computers and remote terminals. PREREQ: CSC 508 (or equivalent).

541 Compiler Construction (3) Translation, loading, and execution of a higher-level language. Syntax analysis of simple expressions and statements. Organization of a compiler, including compile-time and run-time symbol tables, error diagnostics, and object code optimization. Design and implementation of a simple compiler. PREREQ: CSC 508 (or equivalent).

550 Computers in Education (3) The use of the computer as an aid to the educator. The student will receive "hands-on" instruction in the use of CMI, CAI, simulations and educational administrative systems including scheduling, financial accounting, guidance, testing, and libraries.

561 Simulation (3) Computer simulation utilizing logical, numerical, and Monte Carlo modeling to represent systems. Use of special languages to simulate actual systems. PREREQ: CSC 501 (or equivalent) and calculus and linear algebra.

571 Computer Graphics (3) Construction and manipulation of prototypes for graphical display purposes. PREREQ: CSC 501 (or equivalent) and calculus and linear algebra.

590 Independent Project (1-5) The student designs and implements a realistic, fairly complex software system. Project problems are drawn from local industry and college departments. Each project is supervised by a computer science faculty member. PREREQ: consent of instructor.

595 Topics in Computer Science (3) Topics announced at time of offering. PREREQ: consent of instructor.

599 Independent Study (1-4) Student, in conjunction with professor, selects topics to be studied in depth via literature search and reading of pertinent articles. PREREQ: consent of instructor.

MATHEMATICS

Symbol: MAT

503 History of Mathematics (3) Development of mathematics from prehistoric time to present. Emphasis on changes in the mainstreams of mathematical thought through the ages.

506 Fundamentals of Mathematics for Physics (3) A critical examination of mathematics from the viewpoint of its physical applications.

512 Modern Algebra (3) For students with background deficiencies in algebra. Abstract mathematical systems studied include groups, rings, and fields.

513 Linear Albegra (3) Vectors, vector spaces, determinants, linear transformations, matrices, bilinear and quadratic forms. PREREQ: MAT 512 (or equivalent).

514 Theory of Numbers (3) Elementary number theory and selected topics in analytic number theory.

515 Algebra I (3) Elements of abstract algebra. Groups, commutative ring theory, modules, and associative algebras over commutative rings. PREREQ: MAT 512 (or equivalent).

516 Algebra II (3) A continuation of MAT 515. Vector spaces, representation theory, and Galois theory. PREREQ: MAT 515.

517 Topics in Algebra (3) Advanced algebraic theories. Homological algebra, algebraic geometry, and algebraic number theory. PREREQ: MAT 516.

532 Modern Geometry (3) Foundations of geometry. Axiomatics and the structure of a geometric system. Euclidean geometry from the standpoint of the Euclid and Hilbert postulates. Certain topics in projective and hyperbolic geometry.

533 Projective Geometry (3) An algebraic approach to projective geometry. Invariant theory, projective spaces, conics and quadratic forms, subgeometries of real projective geometry.

534 Differential Geometry (3) Modern differential geometry. Calculus on Euclidean space, frame fields, calculus on manifolds, shape operators, Riemannian geometry.

535 Topology (3) Filters, nets, separation axioms, compactness, connectedness, uniform spaces.

536 Algebraic Topology (3) Algebraic topological invariants. Homotopy theory; simplicial, singular and Cech homology; cohomology theories. PREREQ: MAT 516, MAT 535.

537 Topics in Topology (3) Special topics in topology. Dimension theory, topological groups, Lie groups, and differential topology.

541 Advanced Calculus (3) For students with background deficiencies in analysis. Ordinary and uniform limits; sequences of functions; the Riemann integral.

543 Topics in Differential Equations (3) Advanced topics. Existence and uniqueness theorems, stability theory, singular points, regular singular points, Sturm separation theorem, and the "method of Liapunov."

545 Real Analysis I (3) A rigorous study of real valued functions of real variables. PREREQ: MAT 541 (or equivalent).

546 Real Analysis II (3) Continuation of MAT 545. PREREQ: MAT 545.

547 Topics in Analysis (3) Advanced topics selected on the basis of professor and student interests. PREREQ: MAT 546.

570 Mathematical Models in the Life, Physical, and Social Sciences (3) Techniques and rationales of model building. Applications to the life, physical, and social sciences.

571 Computer Simulation and Test of Hypothesis (3) Elements of probability and test of hypothesis. Computer simulation of problems from the life, physical and social sciences.

572 Proseminar (3) Seminar in generating and solving problems in mathematics.

575 Complex Analysis I (3) A rigorous study of complex valued functions of complex variables.

576 Complex Analysis II (3) Continuation of MAT 575. PREREQ: MAT 575.

581 Methods of Applied Mathematics (3) Vector analysis, complex analysis. Fourier analysis, and Sturm-Liouville Theory.

583 Operations Research and Applied Mathematics (3) Topics in applied mathematics. Linear and dynamic programming, game theory, extreme value problems, inventory, allocation, and queuing and search problems.

590 Seminar in Mathematics (3) Topics selected from student and professor interests. PREREQ: consent of instructor.

599 Independent Study (1-3)

610 Thesis (3-6)

MATHEMATICS EDUCATION

Symbol: MTE

501 Fundamental Concepts of Mathematics I (3) Selected topics which reflect the spirit of the modern mathematics currently taught in the elementary school. PREREQ: a one-semester undergraduate course in modern mathematics.

502 Fundamental Concepts of Mathematics II (3) Topics selected by mutual decision of students and professor on the basis of the experience in MTE 501. PREREQ: MTE 501.

504 Research in Mathematics Education (3) Techniques of research in mathematics education. Analysis of types of research; selection of a problem; formulation of a plan of investigation and report, including statistical analysis.

505 Research Techniques in Mathematics Education (3) Statistical principles in experimental design. General linear model correlation, regression, statistical inference, analysis of variance, factorial designs. Critiques of current literature.

507 Current Trends in Teaching Mathematics (3) Philosophy, techniques, subject matter, and effectiveness of current secondary school mathematics courses examined against the changing character of American society and technology.

508 Topics in Mathematics Education (3) Topics announced in advance. Typical topics include: teaching mathematics to the slow learner, methods of research in mathematics education, mathematics laboratories, and individualized instruction.

509 Seminar in Mathematics Education (3) Topics depend upon student interest. Student presentations required; informal discussion encouraged. Guests, including secondary school principals and mathematics curriculum coordinators, frequently participate.

510 Algebra for the Elementary Teacher (3) An introduction to modern algebra. Topics include a comparative study of mathematical systems. PREREQ: MTE 501 (or equivalent).

530 Geometry for the Elementary Teacher (3) Basic concepts in geometry. Euclidean geometry and postulative systems. PREREQ: MTE 501 (or equivalent).

550 Topics in Mathematics for Elementary School Teachers (3) In-depth coverage of topics in mathematics introduced in grades K-8. Topics include: number theory, probability, statistics, inequalities, introduction to the computer. Emphasis among these and inclusion of additional topics depend upon student preparation and need. PREREQ: MTE 501 (or equivalent).

551 Mathematics for the Disadvantaged (3) Examination of current programs in mathematics for the disadvantaged; discussion of the pertinent research literature; development of materials and techniques for teaching the disadvantaged.

552 Materials for Teaching Secondary School Mathematics (3) Examination of available commercial materials for the teaching of mathematics; creation of new and original materials for specific mathematical concepts and specific needs of class members.

553 Teaching Elementary School Mathematics (3) In-depth treatment of strategies, methods, and materials for teaching the following concepts in an elementary classroom: place value; addition, subtraction, multiplication, and division of whole numbers; measurement; elementary number theory; geometry; fractions; integers. PREREQ: MTE 501 (or equivalent).

554 Current Trends in Teaching Elementary School Mathematics (3) History and development of the modern elementary school mathematics programs. Theories and findings of recent and contemporary learning theorists are investigated. Modern organizational strategies surveyed include team teaching, individualized instruction, open space, etc. Contemporary instructional strategies such as individualized learning systems, mathematics laboratories, individually prescribed instruction, etc., are studied. PREREQ: MTE 501 (or equivalent).

555 Modern Techniques of Teaching Elementary School Mathematics (3) Methods of presenting the new mathematics curricula in the elementary grades. Surveys modern techniques such as Individualized Learning Systems, mathematics laboratories, auto-instruction, etc. PREREQ: MTE 501 (or equivalent).

556 Development of Mathematics Curricula in the Elementary Grades (3) For the development of a specialty in modern elementary school mathematics education. Curriculum development techniques; selection and analysis of materials; individualization of instruction programs, techniques, and media. PREREQ: MTE 501 (or equivalent).

558 Teaching Mathematics in the Junior High School (3) Methods and materials for teaching the concepts of middle school and junior high school mathematics. Objectives are developed, and serve as the basis for all course work. Current textbooks, achievement tests, and audio-visual materials are reviewed.

559 Mathematical Logic and Probability Concepts for Secondary School Teachers (3) Essentials of a mathematical system, inductive and deductive reasoning, the laws of logic and the testing of valid arguments; the counting principle, permutations, combinations, elements of discrete probability. Stress on use and application of these concepts in the secondary school.

560 Teaching Algebra in the Secondary School (3) Methods and materials for teaching the concepts of first and second year algebra. Emphasis on relevant applications to real-life situations. Objectives as well as criterion-referenced test items are developed for pre-algebra as well as for the two algebra courses. Current textbooks achievement tests, and audio-visual materials on algebraic topics are reviewed.

561 Calculus for Teachers I (3) Analytic geometry of both the straight line and conics, and elements of calculus of real valued functions of a single real variable are reviewed. Topics include: Limits, continuity, the derivative and its applications, curve sketching, and polar coordinates. Emphasis on methods of teaching these concepts to secondary school students.

562 The Laboratory Approach to Teaching Elementary School Mathematics (3) The materials-oriented approach to teaching elementary school mathematics, including cuisenaire rods, the geoboard, attribute games, tangrams, multibase blocks. Emphasis on learner's participation in activities directly related to mathematics of the elementary school. Use of materials extends to all grade and ability levels.

563 Use of the Mathematics Laboratory in the Secondary School (3) Laboratory investigations and the curriculum; planning laboratory investigations; facilities for the laboratory approach; assessing the effectiveness of this approach with the low, average, and high achiever in the secondary school.

564 Individualizing Instruction in Secondary School Mathematics (3) Analysis of current programs for individualizing instruction in secondary school mathematics (IDEA, PLAN, Nova, Research for Better Schools, and Coatesville Project); analysis and development of an individualized instruction unit with performance objectives, criterion-referenced test items, media orientation, and appropriate tools for evaluation.

567 Teaching Geometry in the Secondary School (3) Methods and materials for teaching the concepts of geometry in the secondary school. Emphasis on the development of relevant applications of the concepts of geometry in real-life situations.

568 Seminar for Secondary School Mathematics Teachers (3) Selected topics of current interest in secondary school mathematics for the in-service teacher.

569 Seminar for Elementary School Mathematics Teachers (3) Selected topics of current interest in elementary school mathematics for the inservice teacher.

599 Independent Study (1-3)

610 Thesis (3-6)

STATISTICS

Symbol: STA

521 Statistics I (3) For non-mathematics majors. Emphasis on applications to education, psychology, and the sciences. Distributions, measures of central tendency and variability, correlation, regression and hypothesis testing, other topics.

522 Statistics II (3) Continuation of STA 521. Applications of distributions, analysis of variance and covariance, multivariate analysis. PREREQ: STA 521.

523 Mathematical Statistics I (3) A rigorous treatment of probability spaces and an introduction to the estimation of parameters.

524 Mathematical Statistics II (3) Continuation of STA 523. Correlation, sampling, tests of significance, analysis of variance, other topics. PREREQ: STA 523.

525 Probability (3) An advanced approach to the elements of probability. Discrete and continuous random variables, probability distributions, sampling distributions.

526 Design and Analysis of Experiments (3) Basic principles of design and analysis of experiments. Randomization, blocking, analysis of multi-level and factorial classifications, multiple comparisons, confounding, fractional replication. PREREQ: a course including statistical inference.

599 Independent Study (1-3)

SERVICE COURSES IN MATHEMATICAL SCIENCES

COMPUTER SCIENCE (CSC)
501 Introduction to Computers
550 Computers in Education

MATHEMATICS EDUCATION (MTE)
501 Fundamental Concepts of Mathematics I
502 Fundamental Concepts of Mathematics II
510 Algebra for the Elementary Teacher
530 Geometry for the Elementary Teacher
550 Topics in Mathematics for Elementary School Teachers
553 Teaching Elementary School Mathematics
554 Current Trends in Teaching Elementary School Mathematics
555 Modern Techniques of Teaching Elementary School Mathematics
556 Development of Mathematics Curricula in the Elementary Grades
558 Teaching Mathematics in the Junior High School
559 Mathematical Logic and Probability Concepts for Secondary School Teachers
560 Teaching Algebra in the Secondary School
561 Calculus for Teachers I
562 The Laboratory Approach to Teaching Elementary School Mathematics
563 Use of the Mathematics Laboratory in the Secondary School
564 Individualizing Instruction in Secondary School Mathematics
567 Teaching Geometry in the Secondary School
568 Seminar for Secondary School Mathematics Teachers
569 Seminar for Elementary School Mathematics Teachers

STATISTICS (STA)
521-2 Statistics I-II

Music

Charles A. Sprenkle, *Dean*
Alexander Antonowich, *Associate Dean*
Ira C. Singleton, *Associate Dean for Graduate Studies and Research*

Department of Music Education
Dr. Carey, *Chairperson*

Professors
Alexander Antonowich, Ed.D., *Columbia University*
Margaretta A. Carey, Ed.D., *Pennsylvania State University*
Richard C. Merrell, Ed.D., *Pennsylvania State University*
Ira C. Singleton, Ph.D., *New York University*
C. Wayne Stringer, Ed.D., *Columbia University; Diploma in Kodaly, Danube Bend University*

Associate Professors
Carol Belmain, M.S., *Ithaca College*

Assistant Professors
John C. Collins, M.A., *Montclair State College*
Sara M. Northeimer, Ed. M., *Temple University*

Department of Music History and Literature
Dr. Schmidt, *Chairperson*

Professors
Constantine Johns, Ed.D., *Columbia University*
Frederick C. Pfleiger, Ph.D., *West Virginia University*
Liselotte M. Schmidt, Ed.D., *Columbia University*
James R. Wells, Ed.D., *Columbia University*

Associate Professor
Sterling Murray, Ph.D., *University of Michigan*

Department of Music Theory and Composition

Dr. Wright, *Chairperson*

Professors
Shirley A. Munger, D.M.A., *University of Southern California; Diploma in piano, Conservatoire Nationale de Musique (Paris)*
Harry Wilkinson, Ph.D., *Eastman School of Music*
James J. Wright, Ph.D., *Eastman School of Music*

Associate Professor
Charles D. Gangemi, M.A., *University of Pennsylvania*
Sister M. Teresine Haban, Ph.D., *Eastman School of Music*
Larry A. Nelson, Ph.D., *Michigan State University*
James D. Sullivan, M.A., *Eastman School of Music*

Department of Instrumental Music
Dr. Barrow, *Chairperson*

Professors
Edward A. Barrow, Ph.D., *West Virginia University*
Irving Hersch Cohen, Ph.D., *New York University*

Associate Professors
Richard A. Boerlin, M.S., *University of Illinois*
Kenneth L. Laudermilch, D.M.A., *Catholic University of America*

Assistant Professors
Terry E. Guidetti, M.Mus., *Northwestern University*
Eugene Klein, M.M.E., *Indiana University*
Harrison C. Roper, M.Mus., *Catholic University of America*
H. Lee Southall, M.A., *Trenton State College*

Instructors
Tyrone Breuninger, M.M., *Temple University*
Joseph A. Goebel, Jr., B.S., *Millersville State College*
Emily T. Swartley, M.Mus., *Temple University*

Department of Keyboard Music
Dr. Veleta, *Chairperson*

Professors
Robert E. Pennington, Mus.D., *Northwestern University*
Robert Schick, A.Mus.D., *Eastman School of Music*
Charles A. Sprenkle, D.Mus.A., *Peabody Conservatory of Music*
Richard K. Veleta, D.Mus., *Northwestern University*

Associate Professors
Robert M. Bedford, M.S., *The Juilliard School*
Helen Hales, M.Mus., *Peabody Conservatory of Music*
Donna F. McHugh, M.Mus., *Catholic University of America*
Praxiteles Pandel, M.S., *The Juillard School*
Shirley T. Pethes, M.Mus., *Indiana University*
Jacques C. Voois, M.Mus., *Manhattan School of Music*
Naomi L. Weiss, M.S., *The Juilliard School*
W. Benjamin Whitten, M.Mus., *Peabody Conservatory of Music*

Department of Vocal and Choral Music
Mr. Sweet, *Chairperson*

Associate Professors
Lois W. Alt, M.Mus., *University of Michigan*
W. Larry Dorminy, M.Mus., *Florida State University*
Mary Lou Frenz, M.Mus., *Westminster Choir College*
H. Raymond Friday, M.Mus., *Diploma, Academy of Vocal Arts*
Emil M. Markow, M.A., *Columbia University*
Jane E. Sheppard, M.Mus., *Indiana University*
Roy D. Sweet, M.Mus., *Eastman School of Music*
Joy Vandever, M.Ed., *West Chester State College*
G. Alan Wagner, M.F.A., *Carnegie-Mellon University*
Lois M. Williams, M.A., *Columbia University; Fulbright Scholar (Germany 1953-1955)*

Assistant Professor
Stella F. Conaway, M.Mus., *The Philadelphia Academy of Music*

The School of Music offers programs leading to the Master of Music degree with concentrations in music education, performance, music theory, or composition; and the Master of Arts degree in history and literature of music. Course selections to meet degree requirements are made by candidates on consultation with their advisors and with due consideration of the candidate's goals, abilities, needs, and interests.

Admission to Degree Programs in Music

In addition to meeting basic College requirements, stated in Admissions, applicants for degree programs are considered on the basis of academic record, interviews, preliminary tests, and auditions. Prior to enrollment:

All applicants must (1) possess appropriate undergraduate degrees and may be required to remedy not more than 12 credits of undergraduate deficiency if the undergraduate degree is not in the area of the intended graduate degree; (2) schedule interviews with the associate dean for graduate studies and research of the School of Music.

Performance applicants: (1) schedule an interview with the chairperson of the appropriate applied music department; (2) submit a repertoire list; (3) demonstrate performance ability at an advanced level by performing for an audition committee.

Theory and/or Composition applicants: (1) schedule an interview with the chairperson of the Department of Music Theory and Composition; (2) demonstrate sufficient pianistic ability to meet the demands of the program. Composition applicants must, in addition, submit original works showing technical facility in composition.

Music History and Literature applicants: arrange through the chairperson of the Department of Music History and Literature for the required tests in reading skill in a foreign language and in basic principles of music history and style-critical analysis, to be followed by an interview with the department chairperson.

Explanation of Numbering System

Course numbers indicate areas of study in music as follows:

500-510	Core Requirements
511-539	Music Education
540-589	Applied Music
590-599	Pedagogy
600-649	Literature and History
650-679	Music Theory
680-699	Research

DEGREE REQUIREMENTS

Note:

Each degree candidate is individually responsible for satisfying degree candidacy and graduation requirements stated elsewhere in this catalogue, and for meeting deadline dates for the May, August, or December graduation, as appropriate.

Master of Music degree in Music Education. Students may choose either the thesis program of 30 semester hours or the non-thesis program of 34 semester hours. Both programs require completion of 15 credits in five core courses: Music 500, 501, 502, 503, 510. Additional course requirements are:

Thesis program: 3 credits in music education; 3 credits in applied music; 3 credits in music electives; 6 credits in research (Music 691, 692, 699).

Non-thesis program: 3 credits in music education 3 credits in applied music; 6-9 credits in music electives; 0-3 credits in unrestricted electives; 4 credits in research (Music 691, 692, 698).

Master of Music degree in Performance. All programs require completion of 6 credits in two core courses (Music 501, 502); 17-19 credits in one of the areas of concentration described below; 3-4 credits of unrestricted electives; 2 credits in recital (Music 697).

Piano Concentration: 10 credits in individual lessons at the advanced level, Piano 565-569; 6 credits in keyboard literature chosen from Music 601, 602, 603, 604; 2-3 credits chosen from Music 546, 551, 590.

Organ Concentration: 10 credits in individual lessons at the advanced level, Organ 565-69; 6 credits in organ literature; 3 credits chosen from Organ 551, Organ 590.

Voice Concentration: 10 credits in individual lessons at the advanced level, Voice 565-569; 2 credits in ensemble, Voice 546; 3 credits chosen from Music 554 or 555, 591, 605, 628; 2-3 credits chosen from Music 556 or 557, 606, 632, 654.

Instrumental Concentration: 10 credits in individual lessons at the advanced level, Music 565-569; 2 credits in ensemble, Music 546; 5-6 credits chosen from Music 556 or 557, 592, 593, 600, 607, 608, 609, 650, 651.

Master of Music degree in Theory or Composition. Both programs require completion of 6 credits in two core courses (Music 501, 502); 17-18 credits in one of the areas of concentration described below; 3-4 credits of unrestricted electives; 3-4 credits in research (Music 692 and 699, Thesis, for Theory; Composition 699 for Composition).

Theory Concentration: 11 credits in required courses, including Music 653, 654, one course in advanced composition chosen from Music 656-658, 663; 6 credits in directed electives chosen from Music 550, 595, 651, 652, 655, 659, 660.

Composition Concentration: 12 credits in required courses, Music 651, 654, 656, 657; 5-6 credits in directed electives chosen from Music 595, 652, 653, 655, 658, 659, 660, 663.

Master of Arts degree in Music History and Literature. 6 credits in two core courses (Music 501, 502); 9 credits in three courses offered by the Department of Music History and Literature; 6 credits in research and bibliography courses; 9 credits in electives (music and related disciplines).

COURSE DESCRIPTIONS

Symbol: MUS (unless otherwise shown)

500 Methods and Materials of Research (3) Basic techniques and procedures. Major types of research. Methods for locating, evaluating, and interpreting evidence. Preparation of a research outline. Offered Spring, Summer, 1978.

501 Aspects of Musical Style I (3) Selected master works from the Middle Ages through the late 18th century. The influence of these works on musical thinking, historical, and technical. Offered Spring, Summer, 1978.

502 Aspects of Musical Style II (3) Selected master works of the 19th and 20th centuries. Offered Fall, 1977; Summer, 1978.

503 Philosophical Foundations of Music Education (3) Historical and philosophical foundations of music education. Application of principles of education to music. Major emphasis on development of a philosophy of the discipline. Offered Spring, Summer, 1978.

510 Current Trends in Music Education (3) Present practices and emerging developments in music education. Offered Fall, 1977; Summer, 1978.

511 Vitalizing Music in the Elementary School (3) Study of song series, instruments, and materials in current use in the elementary classroom.

512 Teaching Music Listening at the Elementary Level (3) For the elementary classroom and music teacher. Teaching elements of music and musical concepts, and developing aesthetic sensitivity through listening.

513 Music Education in the Elementary School (3) For the music educator. Problems, procedures, and materials in the elementary school classroom. PREREQ: elementary music methods, teaching experience.

514 Music Education in the Secondary School (3) The music curriculum in the secondary school. Emphasis on conceptual learning, structured curriculum, independent study, aesthetic experience and current materials. PREREQ: secondary school music methods, teaching experience.

515 Listening Experiences in the General Music Program (3) Approaches to listening experiences and heightened appreciation of music. Materials which elicit pupil response.

516 Administration and Supervision of School Music (3) Administrative problems, curricular content and scheduling, in-service training of teachers, and specialized supervisory techniques for the music curriculum. PREREQ: teaching experience.

517 Psychology of Music (3) In-depth study of learning theories as related to music education and the nature of music.

518 Music in the School Curriculum (3) Approaches to curriculum construction. Evaluation of the music program as an integral part of the school curriculum. PREREQ: teaching experience.

520 Classroom Materials for Music Programs (3) Evaluation of the newest materials for music education.

522 Music in the Middle School (3) Review and critical analysis of music education in the middle school: philosophies; curriculum; practices; personnel.

523 Elementary Orff Techniques (3) Basic Orff melodic and rhythmic techniques for the elementary classroom. Emphasis on developing concepts for individual teaching situations.

524 Intermediate Orff Techniques (3) Continuation of MUS 523. PREREQ: MUS 523.

525 Elementary Kodaly Techniques (3) Basic Kodaly techniques. Adaptation of teaching procedures for elementary school: rhythm; melody; movement; improvisation.

526 Intermediate Kodaly Techniques (3) Continuation of MUS 525. PREREQ: MUS 525.

527 Projects to Individualize Music Classes (3) Evaluating learners and prescribing meaningful modes of instruction for individuals and small groups.

528 Music in Special Education (3) Characteristics of special pupils; adaptation of teaching techniques; materials; curriculum.

529 Instrument Repairs (3) For instrumental teachers. Stresses proper instrument care, preventive maintenance, adjustments, and minor repairs possible with basic equipment and minimal mechanical skill.

530 Classroom Guitar Pedagogy Analysis and experience in pedagogical approaches for the music classroom teacher where guitar is part of the music curriculum. Exploration of alternative approaches used in teaching large or small groups. Performance at indicated levels commensurate with ability in solo and/or ensemble.

532 Related-Arts Pedagogy in Music Education (3) Historical background of the related-arts movement. Principles of related-arts teaching related to musical elements, forms and styles, with appropriate teaching techniques at specified grade levels. Materials for school music programs: basal music series, other texts and literature, resources in related arts. Demonstration lessons and unit planning.

542-45 Concert Choir, Concert Band, Marching Band, Symphony Orchestra, *(Prefixes: COB Band, COC Choir, SYO Orchestra, WIN Wind Ensemble)*
Participation in preparation of programs for concert performance. PREREQ: previous performance in appropriate organizations and/or admission by audition.

546 Ensembles in Piano, Voice, Woodwinds, Brass, Strings, Percussion, or Mixed (2) *(Prefixes: KEN Keyboard, VEN Vocal, PEN Percussion, BEN Brass, WEN Woodwind, SEN String, MEN Mixed)*
Study and performance in selected ensembles arranged to the specific needs of the students. PREREQ: performance ability.

547 Piano Class (Elementary Teachers) (3) A functional study of the piano, primarily for the elementary classroom teacher. Accompanying in the classroom; rhythmic and creative activities; practical classroom materials.

548-49 Class Lessons in Woodwinds, Brass, Percussion, or Strings (2) *(Prefixes: BRC Brass, STC Strings, PEC Percussion, WWC Woodwinds)*
Teaching techniques for each instrumental family.

550 Advanced Keyboard Harmony (3) Use of the piano as a tool in the teaching of music theory. Includes chorale harmonization, examples of the traditional sonorities, contrapuntal exercises, "free style" improvisation, and use of contemporary techniques.

551 Accompanying (3) Principles and problems of accompanying. Vocal and instrumental literature. Studio accompanying at all levels of difficulty. PREREQ: 4 credits in piano.

552 Vocal Diction I (3) English, Italian, and Latin diction. A laboratory course to establish correct pronunciation in singing. The phonetics of these languages are used in selected song repertoire.

553 Vocal Diction II (3) French and German diction. A laboratory course, as described in MUS 529. MUS 529 is not prerequisite.

554-55 Opera Workshop (3) Techniques of producing musical plays. Course study of music and acting only. Preparation of roles, coaching, conducting rehearsals. The workshop experience may lead to a public performance of the material studied.

556-57 Advanced Conducting (2) Study and application of techniques. Ability is developed to read and conduct full scores of major works for large groups. CCO, Choral. ICO, Instrumental. PREREQ: undergraduate conducting.

558 Master Classes in Piano, Organ, Voice, Woodwinds, Brass, Percussion, or Strings (1-2) *(Prefixes: MAK Keyboard, MAC Organ, MAV Voice, MAB Brass, MAP Percussion, MAS Strings, MAW Woodwinds)*
Discussion and performance of literature in the students' current repertoires.

559-60 Individual Lessons at the Minor Level in Piano, Organ, Voice, Woodwinds, Brass, Percussion, or Strings (1) Individual half-hour lessons in all areas,* once weekly. An elective course for all graduate students.

* Areas of performance in applied music: piano, organ, voice, flute, oboe, English horn, clarinet, bassoon, French horn, trumpet, trombone, baritone, tuba, violin, viola, cello, bass, percussion

561-64 Individual Lessons at the Major Level in Piano, Organ, Voice, Woodwinds, Brass, Percussion, or Strings (1-2) Individual half-hour lessons in all areas.* Continued study in the development of repertoire and performing skills. Students may be given permission to register for two course numbers in the same semester, earning the second credit by doing additional outside work and performing in a recital. PREREQ: completion of the performance major requirements at the undergraduate level or admission by audition.

565-69 Individual Lessons at the Advanced Level in Piano, Organ, Voice, Woodwinds, Brass, Percussion, or Strings (2-4) Individual half-hour lessons in all areas,* once weekly. Advanced studies leading to a full-length recital at the master's level. PREREQ: completion of the performance major requirements for the Bachelor of Music degree and/or admission by audition.

590 Piano Pedagogy (3) Principles and procedures of piano teaching at all levels. Opportunity to teach and prepare criticism. PREREQ: teaching experience or evidence of sufficient pianistic background.

591 Vocal Pedagogy (3) Principles and techniques of teaching voice. Materials and procedures for improving tone quality of the individual and the choral group.

592 Marching Band Techniques and Materials (3) Organization, music materials, care of instruments and uniforms, marching essentials, and contemporary techniques.

593 Projects in String Pedagogy (3) Principles and procedures of string teaching. Problems in teaching string classes. Techniques, materials, and methods. PREREQ: teaching experience or evidence of sufficient background in string performance.

594-595 Pedagogy of Music Theory I-II (3) (3) Techniques and materials for teaching music theory. 594 is not prerequisite to 595.

600 Instrumental Literature (3) Instrumental materials for all levels of public schools. Program building and music for special occasions. Class performance, scores, and recordings are used. PREREQ: instrumental methods, performing ability.

601 Baroque Keyboard Literature (3) The Renaissance through development of variation form and dance suite. Emphasis on performance practices, realizing ornament signs and figured basses; transferral to the modern piano; in-depth study of works of Handel, J. S. Bach, and D. Scarlatti. Some student performance required. PREREQ: MUS 224 (Keyboard Literature I) or equivalent.

602 Classical Piano Literature (3) Literature for the early piano (1750-1830). Origin and development of the sonata; performance practices of homophonic style. Music of the sons of Bach, Haydn, Mozart, Beethoven, and Schubert. Sound and structure of the early piano. Some student performance required. PREREQ: MUS 224 (Keyboard Literature I) or equivalent.

603 Romantic Piano Literature (3) Analysis of piano styles of Chopin, Mendelssohn, Schumann, Liszt, Brahms, Faure, Mussorgsky, Tchaikovsky, Rachmaninoff, Granados, Albeniz. Performance practices. The virtuoso etude and problems of technical execution. Some student performance required. PREREQ: MUS 225 (Keyboard Literature II) or equivalent.

604 Twentieth Century Piano Literature (3) Seminal works and styles of this century. Debussy, Ravel, Prokofiev, Hindemith, Schoenberg, Bartok, American composers. Some student performance required. PREREQ: MUS 213 (Theory of Music IV) or equivalent.

605 Vocal Literature (3) Classic song literature, lieder, and modern art songs. Illustrated through performance by the instructor and members of the class and by scores and recordings.

* Areas of performance in applied music: piano, organ, voice, flute, oboe, English horn, clarinet, bassoon, French horn, trumpet, trombone, baritone, tuba, violin, viola, cello, bass, percussion

606 Choral Literature (3) Representative examples of choral music from the various periods. Research in a selected phase of the literature required.

607 Woodwind Literature (3) A comprehensive evaluation of materials for solos and ensembles through performance by the instructor and members of the class and by use of scores and recordings.

608 Brass Literature (3) A survey of solo, ensemble, and orchestral music for brass instruments, including consideration of teaching materials.

609 String Literature (3) Evaluation of materials for solos and ensembles through performance by the instructor and members of the class and by use of scores and recordings.

610 African and Afro-American Music (3) Folk music, spirituals, work songs, field hollers, blues, ragtime, jazz, gospel songs, soul music, rock and roll. Includes some art music by black composers, PREREQ: an introductory music course.

622 Music Criticism and Aesthetics (3) The nature of music, including philosophies of its meaning. Study of music criticism, past and present. Exercises in reviewing concerts and recordings. An elective course for all students.

623 Bach and His Works (3) The life of J.S. Bach; works for organ, keyboard, and other instruments; cantatas and larger choral works.

626 History of Chamber Music (3) The history, forms, and changing styles and media of chamber music from the 16th century to the present. Principal composers are studied.

627 History of Symphonic Music (3) How the symphony orchestra developed from the Baroque Period to the present in its function, literature, instrumentation, and performance practices.

628 History of the Opera (3) The composers and their major contributions to the various schools of opera. PREREQ: 6 credits of history of music.

629 History of Music in the United States (3) Analysis of music and musical trends in America from the Pilgrims to the present.

630 Music in Non-Western Civilizations (3) The music of pre-history, or primitive people of the present time, and the history and nature of oriental music and instruments.

631 Music of the Medieval Period (3) Development of plainsong and secular monody and beginnings and early history of polyphony to the 14th century. Consideration of contemporary trends in the visual arts, history, and literature.

632 Music of the Renaissance Period (3) Sacred and secular music in the Age of Dufay; changing forms and styles through the music of the Franco-Flemish Groups; the frottola and related forms; Palestrina and his contemporaries. Brief consideration of contemporary trends in the visual arts, history, and literature.

633 Music of the Baroque Period (3) Styles and forms of Baroque repertoire; contributions of the major composers; role of music and musicians in the society of the period.

634 The Classical Age in Music (3) Changing styles and forms in: the sons of J.S. Bach; the Viennese pre-classicists; the Mannheim School; opera; Joseph and Michael Haydn, Mozart, and their contemporaries; and the early works of Beethoven.

635 Music in the Romantic Era (3) Historical developments during the Romantic Period (circa 1800-1900). Analysis of changes and trends; comparative aspects of new forms.

636 Contemporary Music (3) Chronological survey of 20th-century music. Development of styles. Technical aspects of changes occurring in melody, rhythm, orchestration, texture, tonality, and form.

637 Problems in Performance Practices (3) History and analysis of special problems in realization and performance of music from the Middle Ages to the present. PREREQ: MUS 221-22 (Music in Western Civilization I-II) or equivalent.

650 Advanced Band Arranging (3) Emphasis on arranging for school bands. Consideration given to bands with inexperienced performers and limited instrumentation. PREREQ: teaching experience and a knowledge of orchestration.

651 Advanced Orchestration (3) Original composition for orchestra. PREREQ: a knowledge of the instruments of the orchestra and experience in their use.

652 Advanced Musical Form (3) A detailed study of musical form, with emphasis on modifications of sonata form; vocal and instrumental forms of Baroque music; and forms which are unique.

653 Advanced Counterpoint (3) Tonal counterpoint. Invention, canon, chorale forms, invertible counterpoint, and fugue. PREREQ: Counterpoint I at the undergraduate level.

654 Modal Counterpoint I (3) Use of modes, musica ficta, and cadences in 16th-century music. Experience in imitation in two parts, using all note values; double counterpoint; pronunciation and setting of Latin texts.

655 Modal Counterpoint II (3) Continuation of MUS 654. Writing in three and more voices. PREREQ: MUS 654.

656-68 Advanced Composition (3) Free composition in larger forms for ensembles, solo voice and chorus, chamber groups, and orchestra. PREREQ: MUS 213 (Theory of Music IV) or equivalent.

659 20th-Century Musical Styles (3) Theoretical study of the compositional techniques of representative contemporary composers, including related study of harmony and form. Creative work in the styles of the composers studied is attempted.

660 Electronic Music (3) Materials and techniques of electronic music and their use in composition. Laboratory experience in the composition of electronic music. PREREQ: MUS 412 (Composition I) or equivalent.

661 Jazz Practices (3) Jazz history, writing, and performance. Survey of basic jazz literature; fundamental techniques in arranging and improvising. PREREQ: MUS 213 (Theory of Music IV) or equivalent.

662 Serialism and Atonality (3) Compositional procedures and theoretical concepts in atonal and serial works of Schoenberg, Berg, Webern, Bartok, Stravinsky, and more recent composers. PREREQ: MUS 213 (Theory of Music IV) or equivalent.

663 Seminar in Music Theory (2) Intensive work in selected areas of music theory. Guidance in individual projects leading to significant current developments in theory. PREREQ: permission of the chairperson of the Department of Theory and Composition.

664 Performance Practices in Contemporary Music (1) A course (1) in which the participants will study technical problems of understanding new notation (e.g. graphic scores, proportional scores, multiphonics, microtones, metric modulation, asymetrical rhythm groupings, prose scores, etc.) and will develop a reasonable facility in performing scores which include these techniques,.(2) which will provide an ensemble for which composition students may compose, and (3) which will establish an ensemble which may publicly perform new music.

680 Special Subjects Seminar (1-3) Significant topics presented by faculty members or visiting lecturers. Designed to meet specific needs of the seminar group.

681-83 Independent Study in Music (1) (2) (3) Individual research under the guidance of a faculty member. PREREQ: permission of instructor.

690 Introduction to Research in Music History (2) Bibliographical materials and research methods. Ability to read at least one foreign language required. PREREQ: permission of instructor.

691-92 Research Seminar in Music (2) (1) A research proposal with supporting procedures is developed. Guidance in individual research topics, with tutorial assistance in form and style of research writing.

696 Recital (1) A shared (half) recital open to candidates for the Master of Music degree (Music Education concentration). In lieu of research report. Program notes required. PREREQ: approval by committee examination.

697 Recital (2) A full public recital, demonstrating an understanding of various performance styles and ability to perform literature from several periods. Required of candidates for the Master of Music in applied music. PREREQ: approval by committee examination.

698 Research Report (1)

COM 699 Musical Composition (3) An advanced composition of significant proportion, demonstrating skill in creative writing for a chosen medium.

699 Thesis in Music Education, Theory, or History and Literature (3)

Nursing

Miss Matz, *Chairperson*

Associate Professor

Doris R. Schoel, Ed.D., *Temple University*

Assistant Professors

Carolyn Ancrum, MEd Nursing Education, *Columbia University*
Virginia Coombs, MSN, *University of Pennsylvania*
Kathleen Devlin, MSN, *Boston University*
Dorris Guerin, MSN, *University of Pennsylvania*
Shirley Harrison, MSN, *University of Pennsylvania*
Mary Kline, MSN, *University of Pennsylvania*
Carol Matz, MSN, *University of Maryland*
Doris Schoel, M.S. in Ed., *University of Pennsylvania*
Anna Swope, Master of Public Health, *Johns Hopkins University*

COURSE DESCRIPTIONS

Symbol: NSG

513 Nursing the Dying Patient (3) The nurse's role in death and dying of aged individuals in the home, community, or institution. Crises of family and those who care for the dying; legal aspects of death; communication problems; the nursing process.

580 Vision Problems Workshop (3) Visual problems associated with the elementary and secondary school-age populations. Screening methods, referral techniques, current modalities of treatment.

581 Hearing Problems Workshop (3) Hearing problems associated with the elementary and secondary school-age populations. Multiple disciplines are utilized in presenting background information and current modalities of diagnosis and treatment.

582 The Nurse's Role in Care of the Developmentally Disabled (3) Extended role of the nurse in care of the handicapped, retarded, cerebral-palsied, and the epileptic. Concepts, principles, and skills in application of physio-psychosocial and vocational rehabilitation.

583 Care of the Acutely Ill (3) Concepts, principles, and skills in application of physio-psycho-social and vocational rehabilitation of persons having an acute illness of a cardiovascular and/or pulmonary nature.

The following dual level course has been approved for graduate credit:

NSG 532 Nursing Theories and Concepts II (3)

Philosophy

Dr. Claghorn, *Chairperson*

PROFESSORS

George S. Claghorn, Ph.D., *University of Pennsylvania*
Walter J. Hipple, Ph.D., *University of Chicago*
Thomas W. Platt, Ph.D., *University of Pennsylvania*
Stanley Riukas, Ph.D., *New York University*
Frederick R. Struckmeyer, Ph.D., *Boston University*

ASSOCIATE PROFESSORS

W. Stephen Croddy, Ph.D., *Brown University*
Paul A. Streveler, Ph.D., *University of Wisconsin*

The Department of Philosophy offers a program leading to the Master of Arts in philosophy. This degree will serve as a foundation for studies leading to a Ph.D. in philosophy or prepare one for positions in industry, government, or college teaching.

Admission to the Program

In addition to meeting general requirements for admission to a degree program at West Chester, applicants must present a minimum of 12 hours of undergraduate philosophy, including courses in history of ancient philosophy, history of modern philosophy, ethics, and logic.

Foreign Language Requirement

Candidates for the M.A. must demonstrate a reading proficiency in French, German, or Spanish.

Final Examination Requirement

A comprehensive, written final examination is required. This will cover four fields: (1) Metaphysics; (2) any two from: Logic, Ethics, Aesthetics, Philosophy of Language, Philosophy of Science, or American Philosophy; and (3) any one from: Plato, Aquinas, Kant, or Wittgenstein.

MASTER OF ARTS IN PHILOSOPHY

30 Semester Hours

All candidates are required to take PHI 511 and a seminar selected from PHI 640, 641, 642, or 643. Beyond these requirements the student has the choice of a thesis or non-thesis program.

The thesis program requires 9-12 semester hours in philosophy; 3-6 semester hours of electives, chosen from philosophy or related courses; and the thesis (PHI 610) for 6 semester hours.

The non-thesis program specifies 15-18 semester hours in the philosophy concentration and 3-6 semester hours of electives (philosophy or related).

COURSE DESCRIPTIONS

Symbol: PHI

506 Meaning in Language (also LIN 506) (3) A discussion of topics having to do with meaning in everyday oral communication.

510 Existentialism (3) Background and themes of current existentialism, as reflected in Kierkegaard, Jaspers, Marcel, Heidegger, and Sartre. Evaluation of existentialism and its impact on contemporary literature, drama, art, and society.

511 Philosophic Concepts (3) Basic concepts of the philosophic enterprise: form, matter, the categories, cause, and purpose. Relation of premises to method and conclusions. Rival theories are compared for justification and adequacy.

512 Contemporary Ethical Theories (3) Examination of various ethical theories of our time: pragmatism, evolution, idealism, hedonism, natural law, and other schools. Practical applications are made to such problems as authority, punishment, rights, marriage, and race.

513 History of Aesthetics (3) History of aesthetics, as seen in classic interpretations. Origins of art, psychological and sociological; the role of art works in the enrichment of life.

514 Philosophy of Religion (3) Dominant trends in religious philosophy of the Western world. Religious language, reason and faith, science, the nature of man, the existence of God, and mysticism.

520 Philosophy of Mind (3) The human mind, according to representative views. Presuppositions and implications, both scientific and philosophic, traced and analyzed. The mind-body problem; perception; memory; and the implications of depth psychology.

521 Philosophy of the Social Sciences (3) Philosophic issues in the social sciences; laws, procedures, and prediction. The formation of concepts and theories; evaluation of evidence and cause; determination of patterns and goals.

522 Philosophy of Science (also SCI 522) (3) The course begins with case studies in science and derives general principles from them. Scientific law, analogy, models, variant theories, confirmation, and interpretation.

523 Philosophy of Language (also LIN 523) (3) Problems of language and oral communication, with emphasis on problems of reference.

528 Colonial American Philosophy (3) Early American views of man, the world, and history. European heritage, native adaptations, and developments preparing for the Revolution. Emphasis on Jonathan Edwards as a representative philosopher.

530 Modern American Philosophy (3) Peirce, James, and Dewey; the origin, development, and nature of their philosophy; their influence on American life. Pragmatic views of knowledge, ethics, law, and society.

531 Oriental Philosophy (3) Central figures and classic teachings of Eastern philosophy and religion: Islam, Hinduism, Buddhism, Confucianism, Taoism, and Shintoism; naturalistic and humanistic elements of decisive influence on the culture of the Orient.

536 Symbolic Logic (3) Basic principles and methods of symbolic logic. Practice in determining validity of sentential and quantificational arguments. The algebra of classes.

590 Independent Studies in Philosophy (3)

610 Thesis (3-6)

640 Plato Seminar (3) Plato's life, development, and doctrines. Several chief dialogues from the standpoint of critical interpretations.

641 Aquinas Seminar (3) Major themes of St. Thomas from the *Summa Theologica* and the *Summa Contra Gentiles.* His view of man, the good, the beautiful, the true, the state, the world of Nature, and of God.

642 Kant Seminar (3) A study of Kant's *Critique of Pure Reason,* with reference to his development and his contributions to ethics, aesthetics, and philosophy of religion.

643 Wittgenstein Seminar (3) A study and evaluation of Wittgenstein's principal works, the *Tractatus and Philosophical Investigations;* his influence; the implications of his work for perennial problems of philosophy.

Physical Science Program

(Interdepartmental)

Coordinators: Dr. Medeiros (Chemistry), Dr. Greenberg (Earth Sciences), Dr. Smith (Physics)

A degree program designed primarily for those who teach the physical sciences in secondary school or junior college is given on an interdepartmental basis through the Departments of Chemistry, Earth Sciences, and Physics.

Leading to the Master of Arts degree, the program makes it possible for students to plan a sequence of studies meeting their individual needs. This may be accomplished either through selections from each of the disciplines or by concentrating in one of them.

Entrance Requirements

Students entering the program are normally expected to have a bachelor's degree in science or science education and, if teaching in the public schools, a valid teaching certificate.

MASTER OF ARTS IN PHYSICAL SCIENCE

34 Semester Hours

Science education requirements for the program must be met with ESS 500—Modern Trends in Science Education and PHS 502—Modern Trends in Teaching Physical Science. A science elective area of at least 29 semester hours is developed, under advisement, from selections in chemistry, earth sciences, marine science, and physics. It is also possible to concentrate the elective area in either chemistry, earth sciences, marine science, or physics.

At the end of the program the student must pass a comprehensive examination dealing with topics he or she would ordinarily teach.

For course offerings see Chemistry, Earth Sciences, Marine Science, and Physics.

Physics

Dr. Skelton, *Chairperson*

PROFESSORS

Russell K. Rickert, Ed.D., *New York University*
Mary L. Shoaf, Ph.D., *Purdue University*
Frank A. Smith, Jr., Ed.D., *Temple University*
Stanley J. Yarosewick, Ph.D., *Clarkson College of Technology*

ASSOCIATE PROFESSORS

Robert W. Hawkes, M.S., *Pennsylvania State University*
Brent Kaplan, M.M.E., *New York University*
Harold L. Skelton, Ph.D., *University of Delaware*

The Department of Physics is one of three departments within the School of Sciences and Mathematics offering a degree program leading to the Master of Arts in physical science. See *Physical Science Program.*

COURSE DESCRIPTIONS

PHYSICAL SCIENCE

Symbol: PHS

502 Modern Trends in Teaching Physical Science (2) Materials and techniques in secondary-school physical science.

504 Foundations of Physics (3) Introduction to classical physics; vectors, mechanics, waves.

505 Modern Concepts in Physics (3) Introduction to electricity and magnetism, light, the nature of radiation, quantum and atomic physics, radioactivity. PREREQ: 504 or equivalent.

506 Seminar in Physical Science (1) Topics depend on backgrounds and interests of the students. PREREQ: 3 graduate courses in physical science.

507 Modern Trends in Physical Science (3) Recent developments in physical science and their relation to secondary school science. Topics depend on backgrounds and needs of students.

510 Electronics (3) Laboratory oriented course. Review of A.C. and D.C. circuits; transistor circuits, introduction to integrated circuits, and digital electronics. PREREQ: general physics.

511 Electricity (3) Analysis of the principles of electricity and electromagnetism. PREREQ: differential and integral calculus, general physics.

512 Mechanics (3) Mathematical analysis of dynamics and statics. PREREQ: differential and integral calculus, general physics.

513 Modern Physics (3) Twentieth-century contributions and ideas, including special relativity, quantum theory, atomic structure, solid state structure. PREREQ: general physics.

522 Optics (3) A course in geometrical and physical optics. Topics include reflection and refraction, thin lenses, the optics of vision, interference, diffraction, polarization, and the laser.

524 Experimental Physics (1-3) Experiments in modern and atomic physics, selected to suit backgrounds and interests of the students. PREREQ: atomic or modern physics.

571 Physics for the Elementary Teacher (3) A study of topics in physics selected for their applicability to the elementary school curriculum. Topics include crystals and crystal growing, light, motion, heat, and electricity.

590 History of the Physical Sciences (3) From Aristotelian concepts to modern scientific concepts.

592 Independent Studies (1-3)

SCI 522 Philosophy of Science (see PHI 522)

PHYSICS

513 Analytical Dynamics (3) Wave propagation; Lagrange's equations and Hamilton's principle; rigid body motion; special relativity.

514 Heat and Thermodynamics (3) Equations of state; first and second laws of thermodynamics; ideal and real gases; entropy; statistical mechanics.

515 Mathematical Physics I (3) Topics of mathematics applied to problems in physics. Topics include ordinary differential equations, complex variables and hyperbolic functions, vector calculus, and numerical analysis.

532 Nuclear Physics (3) Basic nuclear properties, nuclear structure, alpha and beta decay, gamma radiation, nuclear reactions, particle accelerators, detection equipment, and elementary particles.

533 Nuclear Physics Laboratory (1) Ordinarily accompanies PHY 532. Preparation and handling of radioactive samples and examination of nuclear decay characteristics and reactions. With instructor's approval, PHY 533 may be elected without concurrent enrollment in PHY 532.

POLITICAL SCIENCE—See Government and Politics

Psychology

Dr. Clark, *Chairperson*
Dr. Jackman, *Coordinator for the Graduate Program in Psychology*

PROFESSORS

Elise Bartholomew, Ph.D., *Harvard University*
Jay L. Clark, Ph.D., *University of Minnesota*
Ruth C. Feldman, Ed.D., *Temple University*
Martin J. Higgins, Ph.D., *University of Maryland*
Walena C. Morse, Ph.D., *Bryn Mawr College*
Jack Porter, Ed.D., *Temple University*
Harold R. Sands., Ph.D., *Pennsylvania State University*

ASSOCIATE PROFESSORS

Bernard B. Cohen, Ph.D., *New York University*
Kenneth L. Jackman, Ph.D., *University of Wyoming*
Louis H. Porter, Ph.D., *Howard University*
Elizabeth H. Pottieger, M.A., *Temple University*
Robert R. Shinehouse, M.A., *Temple University*

ASSISTANT PROFESSOR

Edward I. Pollak, Ph.D., *University of Connecticut*

Three degree programs are offered by the Department of Psychology. One of the degree programs leads to the Master of Arts in psychology; the second to the Master of Arts in social science with a concentration in psychology; the third program, offered in cooperation with the School of Education, leads to the Master of Education in social science with a concentration in psychology.

Applicants must submit three letters of reference, GRE or Miller Analogies Test results, and transcripts from all colleges attended. Subsequent to a review of these credentials, applicants will be interviewed by a committee of department faculty. The final decision to accept or reject an applicant is based upon all of the above information.

Special Examinations

Before applying for Degree Candidacy, students must complete the departmental Candidacy Examination. Successful completion of the departmental Comprehensive Examination is a requirement for the degree. An oral defense of the thesis or other oral examinations may be required as determined by the department's Graduate Committee.

MASTER OF ARTS IN PSYCHOLOGY

33 Semester Hours

Required courses are PSY 503-504-505-506-512. In a required area of research, the candidate has the option of writing a research report (PSY

600), a thesis (PSY 610), or undertaking an internship in an applied setting (PSY 615). Depending upon the number of hours devoted to research (from 2 to 6), the student takes from 12 to 16 semester hours of electives in psychology, chosen under advisement from the offerings shown below. With the permission of the department two of the elective courses (not more than 6 semester hours) may be free electives selected from the offerings of any school in the college.

MASTER OF ARTS IN SOCIAL SCIENCE

Concentration: Psychology

30 Semester Hours

The Master of Arts in social science, an interdisciplinary degree within the School of Social and Behavioral Sciences, is particularly designed for teachers desiring strengthened subject-matter knowledge in more than one academic discipline. The program also prepares students for careers in government and industry and is appropriate for those desiring cultural enrichment. The concentration in psychology is especially recommended for students whose interests are directed toward human concerns and services. Candidates in this concentration are advised by the Department of Psychology.

Requirements:

In the research area PSY 503-504 are required. The student must take from 9 to 12 additional semester hours of psychology courses, selected under advisement. Within the concentration a research report (PSY 600), a thesis (PSY 610), or an internship in an applied setting (PSY 615) may be recommended.

Beyond the psychology concentration, the student must complete 12 semester hours of social science electives chosen from at least two departments other than psychology within the School of Social and Behavioral Sciences. Finally there is a cognate elective area of 0-3 semester hours, to be chosen from any school in the college.

MASTER OF EDUCATION IN SOCIAL SCIENCE

Concentration: Psychology

34 Semester Hours

The Master of Education in Social Science with a concentration in psychology is intended for certified social science teachers who teach psychology at the secondary level. It strengthens their theoretical background in psychology and their teaching by providing 20-22 semester hours in psychology and 10-12 hours in professional education (see page 129). Psychology courses must include PSY 503, 504 and 600. Additional psychology courses are chosen under Department of Psychology advisement.

Remaining electives of 0 to 4 semester hours may be taken either in psychology or in education.

COURSE DESCRIPTIONS

Symbol: PSY

501 Introductory Statistics for the Behavioral Sciences (3) Central tendency, variability, standard scores, correlation, probability, sampling, tests of hypotheses, "t" test, chi square, distribution-free statistics, introduction to analysis of variance.

502 Advanced Statistics for the Behavioral Sciences (2) Special correlational methods, analysis of variance, and analysis of covariance. PREREQ: PSY 501.

503-504 Research Methodology and Statistics I-II (3) (3) Usefulness of the experimental method is discussed through analysis of the assumptions and limitations of classical research designs. Hypothesis testing and statistical decision-making; parametric and nonparametric statistical analysis. In PSY 503 the student develops a research proposal leading to a research project which is completed in PSY 504. 503 must precede 504.

505 Advanced General Psychology (3) Lectures and readings for a deeper understanding of human behavior through intensive consideration of learning, memory, cognitive processes, motivation, emotion, human development, personality, and group processes.

506 Theories of Learning (3) Survey and critical review of existing theories of learning and the relevant research data.

507 Advanced Child Psychology (3) Research findings and theoretical issues during the period from birth to pubescence with emphasis on cognitive development, learning, motivation, emotional development, socialization, perception, and biogenic factors.

508 Advanced Adolescent Psychology (3) The psychodynamics of age 12-21 and the effects of this period on social and educational growth. Such processes as physiological changes, personality development, learning, and psychosexual development are considered.

509 Advanced Social Psychology (3) Current problems and research with emphasis on application and experimental techniques.

512 Psychology of Personality (3) The interaction and effects of forces which affect personality development. Normal and neurotic development contrasted; principles of personality measurement explored.

517 Introduction to Psychopathology (3) Advanced study of abnormal development and a description of pertinent types, including symptoms, causes, and treatment. Current and recent theoretical approaches and research findings relevant to the etiology and treatment of these disorders. PREREQ: PSY 375—Abnormal Psychology or equivalent, or permission of instructor.

524 Psychometrics (3) A survey of measurement theory in psychology with emphasis on the logic of measurement, scaling models, statistical methods, construction of valid measures. Advanced techniques for assessment of reliability. By permission only (Usually restricted to degree candidates).

527 Behavior Modification (3) Application of learning principles and environmental control to behavior change. Foundation principles, techniques and assessment, methods of modification. By permission only (Usually restricted to degree candidates).

529 Advanced Mental Hygiene (3) Ways of achieving positive mental health, including ways people can improve their mental health through their own efforts.

544 Individual Psychometric Techniques: Wechsler & Binet Scales (3) Historical development, administration, scoring, and interpretation of the Wechsler and Binet scales. PREREQ: PSY 501. By permission only (Usually restricted to degree candidates).

549 Introduction to Projective Techniques and Personality Testing (3) History and theory of personality testing. Practical applications typical of clinical and educational settings. By permission only (Usually restricted to degree candidates).

550 Seminar in Psychology (1-3) Selected problems in psychology. Subject announced in advance of each semester.

555 Psycholinguistics (ALSO LIN 555) (3) See LIN 555.

559 Psychotherapy (3) Techniques and problems involved in counseling and psychotherapy. PREREQ: PSY 390—Principles of Counseling and Psychotherapy or equivalent. By permission only (Usually restricted to degree candidates).

590 Independent Studies in Psychology (1-3) Research projects, reports, readings in psychology. PREREQ: approval of department chairperson.

595 Clinical Psychology (Child and Adolescent) (3) Survey of clinical techniques used in assessment and treatment of childhood and adolescent personality disorders. By permission only (Usually restricted to degree candidates).

596 Clinical Psychology (Adult) (3) Theoretical foundations of clinical evaluation, screening, and treatment methods. Emphasis on clinical psychology as a profession. By permission only (Usually restricted to degree candidates).

600 Research Report (2) An original review of the literature.

610 Thesis (3) An original empirical study. PREREQ: PSY 504 or permission of instructor.

615 Clinical Practicum in Psychology (2-6) Supervised professional participation in applied psychological activities or projects in cooperating agencies and institution.

620 Practicum in School Psychology (3-15) Supervised experience as a school psychologist. Offered for students seeking out-of-state certification as a school psychologist (West Chester State College does not presently offer a program leading to certification as a School Psychologist in the Commonwealth of Pennsylvania).

Reading

Dr. Gelfand, *Chairperson*

PROFESSORS

Jane K. Gelfand, Ed.D., *Lehigh University*
Joseph C. Hall, Ed.D., *Temple University*

ASSOCIATE PROFESSORS

K. Eleanor Christensen, Ph.D., *University of Delaware*
Mary A. Keetz, Ph.D., *University of Pennsylvania*

ASSISTANT PROFESSORS

Bernice J. Salup, Ed.D., *Temple University*
Robert J. Szabo, Ed.D., *Lehigh University*

Through its graduate reading program, the School of Education offers: (1) the Master of Education degree with a major in reading and (2) Reading Specialist Certification. Students who complete either program are recommended for Pennsylvania Certification as Reading Specialists.

These programs prepare candidates to serve in special reading positions and as classroom teachers of reading in elementary or secondary schools.

ADMISSION TO THE DEGREE PROGRAM

1. The student must possess an Instructional I Certificate.
2. The Graduate Record Examination Aptitude Test and/or the Miller Analogies Test is required. Scores must be on file within the student's first semester or session.
3. Courses required within the pre-candidacy period are: EDR 510, 511, 514 or 515, and EDF 500; and one additional course from the prescribed program.
4. An overall average of 2.75 and a minimum of 3.00 in reading courses must be maintained during the pre-candidacy period.

DEGREE PROGRAM REQUIREMENTS

In addition to meeting degree requirements of the college the candidate must:

1. Successfully complete the reading curriculum and any additional courses which may be required by the reading faculty.
2. Achieve an overall average of at least 2.75 and a minimum of 3.00 in reading courses.
3. Perform satisfactorily on the comprehensive examination in reading. Responsibility for meeting all requirements at the proper time rests with the student.

THE COMPREHENSIVE EXAMINATION

The student is eligible for the comprehensive examination upon completion of all prescribed work and the recommendation of the advisor. The examination is given the first Saturday in November, the first Saturday in March and the second Saturday in July. Application for the examination must be made in writing to the department chairperson by September 1 for the November examination, January 1 for the March examination and May 1 for the July examination.

Candidates who fail the comprehensive examination are permitted one re-examination within a two-year period. Upon a second failure, candidates are dropped from the degree program.

MASTER OF EDUCATION IN READING

36 semester hours

Professional Education Requirements: EDF 500 and EDF 510 6 s.h.

Area of Concentration Requirements:
EDR 510, 511, 514 or 515, 516, 521, 522, 541 21 s.h.

Area of Concentration Electives:
Selected, under advisement, from EDR 523, 525, 526, 540, 542, 590 3 s.h.

Related Study Requirements: At least one course from Group A and one from Group B must be selected, under advisement. Exception: other courses may be substituted with prior approval of advisor. 6 s.h.

GROUP A (Language Arts): EDE 522, 543, 548, 549, 583, LIT 550, LIT 551, ENG 690

GROUP B (Related Areas): EDA 571, EDC 540, EDE 551, EDE 553, EDE 554, EDU 501.

READING SPECIALIST CERTIFICATION

30 semester hours

Requirements for the Certification Program:

1. The student must possess an Instructional I Certificate.
2. Courses required within the first 15 hours are EDR 510, 511, 514 or 515, and 516.
3. An overall average of 2.75 and a minimum of 3.00 in reading courses must be maintained.
4. In order to obtain the certificate the student must successfully complete the program shown above under "Master of Education in Reading" except that the student is not required to take the two courses in Professional Education.
5. The student must perform successfully on the competency examination.

COURSE DESCRIPTIONS

Symbol: EDR

510 Foundations in Reading Instruction K-12 (3) Psychology and pedagogy of reading instruction. The nature of the reading process; the nature of the learner; skill development; instructional strategies. Offered in fall, spring and summer.

511 Current Practices in Teaching Developmental Reading (3) A refinement and application of teaching techniques, advanced basic skill development and evaluation and usage of instructional materials (K-12). PREREQ: 510 or permission of instructor. Offered fall, spring, summer.

514 Reading in the Content Areas: Elementary (3) The specialized reading skills, reading problems, teaching techniques, and reading activities in content subjects at the elementary level. PREREQ: 510 or permission of instructor. Offered in fall.

515 Reading in the Content Areas: Secondary (3) The specialized reading skills, reading problems, teaching techniques, and reading activities in content subjects at the secondary level. PREREQ: 510 or permission of instructor. Offered in spring.

516 Reading Disabilities (3) Concerned with the nature of reading disability and diagnosis and remediation of reading problems. PREREQ: 511. Offered in fall and summer.

521 Reading Clinic Practicum and Seminar I (3) A laboratory course. Diagnosis of reading difficulties of elementary and secondary students with reading problems. Major attention given to diagnosing corrective cases and writing case reports. PREREQ: 514 or 515; 516. Offered in fall and summer.

522 Reading Clinic Practicum and Seminar II (3) Continuation of 521. Opportunities to develop specific techniques for correcting various types of reading disability cases. PREREQ: 521. Offered in spring and summer.

523 Reading as a Language Process (3) Basic concepts from areas of phonology, morphology, syntax, semantics, sociolinguistics, dialectology, and psychology will be related to the teaching of reading in grades K-12.

525 Reading for the Disadvantaged (3) Historical, cultural, and educational contexts of current issues as they relate to language competency programs, evaluation, and reading instruction for disadvantaged learners.

526 Reading Readiness and Early Childhood Educational Experiences (3) Concerned with children's readiness for initial reading instruction. Emphasis on instructional recommendations and implementations for a range of abilities. PREREQ: 511 or permission of instructor.

540 Seminar in Reading (3) Critical examination of trends, opinions, and current research in the teaching of reading. PREREQ: 516 or permission of instructor.

541 Organization and Operation of Reading Programs: K-12 (3) Practical application of the reading specialist's role in organizing and operating K-12 reading programs. Emphasis on the use of the total school community in meeting individual reading needs. PREREQ: 522 or permission of instructor. Offered in fall, spring and summer.

542 Seminar in Reading Research (3) A seminar in the basic techniques and sources of research in reading. Exposure to significant research in the field. PREREQ: 516 or permission of instructor.

590 Independent Study and Research (1-6) Individual investigation and exploration of related reading research. Topic must be approved by the supervising instructor prior to registration.

Science Education

COURSE DESCRIPTIONS

Symbol: SCE

500 Modern Trends in Science Education (3) Introduction to current research in science education; a critical review of the literature.

510 Workshop in Secondary School Curricula (3) Study of one of the commonly used science programs for secondary schools. The selected program is announced in advance.

520 New Trends in the Elementary School Science Curriculum (3) New developments in the elementary-school science curriculum for in-service elementary school teachers and administrators.

523 Instructional Materials in Elementary Science (3) Acquaints elementary-school teachers and administrators with instructional materials for the elementary-school science program.

595 Elementary School Science Instruction (3) A course to improve the science content backgrounds of elementary-school teachers and administrators.

596 Workshop in Elementary School Science Instruction (3) A study of one or more science programs for the elementary school. Especially for teachers using the selected program or programs. Selections announced in advance.

SCIENCE OFFERINGS DESIGNED FOR ELEMENTARY SCHOOL TEACHERS

ESS 521	Geology in the Elementary School
ESS 556	Workshop in Aerospace Science
ESS 571	Astronomy in the Elementary School
PHS 571	Physics for the Elementary Teacher
SCE 520	New Trends in the Elementary School Science Curriculum
SCE 523	Instructional Materials in Elementary Science
SCE 595	Elementary School Science Instruction
SCE 596	Workshop in Elementary School Science Instruction

SOCIAL SCIENCE—see History for social science courses. For degree programs in social science see, Geography and Planning, Government and Politics, History, and Psychology.

SOCIOLOGY—see Anthropology and Sociology

Secondary Education and Professional Studies

Dr. Mississyan, *Chairperson*
Mr. Gleockler, *Assistant Chairperson*

PROFESSORS
Michael F. Bannon, Ed.D., *George Peabody College for Teachers*
Walter E. Buechele, Jr., Ed.D., *Temple University*
Mary E. Cleary, Ed.D., *George Washington University*
Harry H. Deischer, Ed.D., *University of Pennsylvania*
Charles W. Good, Ed.D., *Temple University*
Robert S. Means, Ph.D., *University of Alabama*
Kegham A. Mississyan, Ph.D., *University of Pennsylvania*
George M. Thomas, Ed.D., *Temple University*
Shirley Ann Walters, Ed.D., *Temple University*
Thomas B. Williams, Ed.D., *Temple University*

ASSOCIATE PROFESSORS
Richard C. Gleockler, M.Ed., *Bucknell University*
John Holingjak, Jr., Ed. M., *Temple University*
F. William Leeds, M.A., *University of Pennsylvania*
Reynold D. Paganelli, C.A.S., *Johns Hopkins University*
Jay Silverman, Ph.D., *New York University*

ASSISTANT PROFESSORS
Jack P. Edwards, M.Ed., *West Chester State College*
Yi-Ming Hsu, Ed.D., *University of Georgia*
Thomas W. Treadwell, M.A., *University of Bridgeport*

The Department of Secondary Education and Professional Studies is responsible for the professional courses offered for certification on the secondary level and in the Master of Education degree programs having academic concentrations. The department also offers other professional course work required in all M.Ed. programs and some courses designed for election by educators and others who wish to develop new insights and/or to strengthen professional skills.

In addition the department offers the degree of Master of Education in Secondary Education, a program introduced in August, 1973.

MASTER OF EDUCATION

(Secondary Education—Academic Subject Majors)

The Master of Education program is offered with academic concentrations in English, French, German, Latin, Spanish, biology, geography, mathematics, and social science (with concentrations in history, political science, or psychology). This program is offered cooperatively by the School of Education and the School of Arts and Letters, Sciences and Mathematics, and Social and Behavioral Sciences. The academic requirements for each concentration are found under the respective department.

This degree affords students the opportunity to strengthen their knowledge in the major subject matter field, as well as their professional knowledge and competence.

Students earning degrees in this program must be advised both by the department of the subject field and by the Department of Secondary Education and Professional Studies. It is the responsibility of the students to arrange for conferences with both departments in planning their programs.

REQUIREMENTS FOR THE MASTER OF EDUCATION

(Secondary Education—Academic Subject Majors)
34 Semester Hours

I. Professional Education Requirements* 10-12 s.h.
- A. EDF 510 Educational Foundations (3)
- B. A minimum of one course from each of the following groups:

Group 1
- EDF 516 Resource Allocation in the Schools (3)
- EDF 520 Comparative Education (3)
- EDF 521 Contemporary British Education (3)
- EDF 523 Education Behind the Iron Curtain (3)
- EDF 580 History of American Education (3)
- EDF 581 Philosophy of Education (3)
- EDF 582 Seminar in the History of the Problems of Education (3)
- EDF 589 Sociological Foundations of Education (3)

Group 2
- EDF 503 The Emerging Curriculum (3)
- EDF 507 Values Clarification in Human Relations (3)
- EDF 509 Contemporary Teaching Trends (3)
- EDP 550 Advanced Educational Psychology (3)
- EDP 557 Essentials of Learning (3)
- EDP 559 Constructing and Evaluating Behavioral Objectives (3)
- EDP 560 Behavior Modification (3)
- EDP 569 Adolescent Development and Learning (3)
- EDS 524 Supervision of Student Teaching (3)
- EDU 502 Human Relations in the School and Community (3)

Group 3
- EDC Group Dynamics (3)
- EDF 504 Middle School Workshop (3)
- EDF 505 Individually Prescribed Instruction (3)
- EDF 506 Design and Use of Individualized Learning Packages (3)
- EDF 515 Federal and State Role in Education (2)
- EDF 570 The Community/Junior College (3)
- EDF 590 School Law (3)
- EDS 502 Secondary School Curriculum (3)
- EDS 506 The Junior High School (3)
- EDU 501 Curricular Adaptations for the Disadvantaged (3)

II. Subject Matter Concentration Requirements 20-22 s.h.
- A. Methods and Materials of Research (2-3)
- B. Academic Subject (18-20)
  (See respective academic department for details)

III. Electives (Professional or Academic)* 0-4 s.h.

* Chosen in conference with the secondary education and academic advisors, according to the needs of the student

COMPREHENSIVE EXAMINATIONS

The student must perform satisfactorily on the final comprehensive examinations covering the subject-matter concentration and the professional-education requirements.

MASTER OF EDUCATION IN SECONDARY EDUCATION

35 Semester Hours

This program provides another option within the Master of Education shown immediately above, and is designed primarily to strengthen the professional knowledge, skills, and understandings of the graduate student and of teachers in service, and to make their preparation more relevant to a variety of educational situations. It also provides the professional background for dealing effectively with problems encountered in secondary schools. Through its 14 semester-hour elective area, the program affords students the opportunity to strengthen their knowledge in the subject-mater field.

Admission to the Program

In addition to meeting admission requirements of the college the student must:

1. Be approved by the Department of Secondary Education and Professional Studies for graduate work.
2. Attain an acceptable score on the Graduate Record Examination or the Miller Analogies Test.

It is strongly recommended that the applicant have a valid teaching certificate. Applicants whose certification is not in secondary education may, at the department chairperson's discretion, be required to take course work beyond the minimum semester-hour requirements for the degree.

Upon admission, students will be assigned advisors who will help them to outline an appropriate program. All work for the program must be approved by the advisor and the departmental graduate committee.

Requirements for Admission to Degree Candidacy

During the pre-candidacy period the student must:

1. Attain full status, if admission status to the program was provisional.
2. Complete these required courses: EDF 500, 510, and EDP 550.
3. Achieve a minimum overall average of 2.75 and a minimum average of 3.00 in the required courses and in courses in Area One or Area Two.
4. Show evidence of academic, personal, and professional qualities which satisfy the advisor and the departmental graduate committee.

Comprehensive Examination

Students must perform satisfactorily on a written comprehensive examination, which is given at least once in each semester and in regular session of summer. The examination is always given at 6:00 P.M. on Tuesday of the second week of the semester or session.

Application forms for the comprehensive examination are available from the department and must be filed with the department by December 1 for spring semester, May 1 for regular session, and July 14 for fall semester.

To be eligible the students must have:

1. Taken the required courses: EDF 500, 510 and EDP 550.
2. Completed 28 semester hours of work including the 9 semester hours of required courses and 12 semester hours from Area One or Area Two.
3. Attained a minimum overall average of 2.75 and a minimum average of 3.00 in the required courses and the courses in Area One or Area Two.
4. Received their advisors' recommendations and the approval of the departmental graduate committee.

Students who fail the comprehensive examination are allowed a second attempt. A second failure terminates candidacy.

REQUIREMENTS FOR THE MASTER OF EDUCATION IN SECONDARY EDUCATION

34 Semester Hours

I. Required Courses: EDF 500, 510, EDP 550—9 semester hours
II. Area of Concentration Requirements: A minimum of 12 semester hours must be selected from one of the following two areas:
   A. Area One: EDF 515, 516, 520, 521, 523, 570, 580, 581, 582, 589, 590
   B. Area Two: EDF 503, EDF 504, EDF 505, EDF 506, EDF 507, EDF 509, EDM 511, EDP 557, EDP 559, EDP 560, EDP 569, EDS 502, EDS 506, EDS 524, EDU 501
III. Electives: 14 semester hours. The electives may be from courses in Area One and Area Two above, or from courses in the student's teaching field. They rnay also be a combination of both.

COURSE DESCRIPTIONS

Foundations

Symbol EDF

500 Methods and Materials of Research in Education (3) Historical, descriptive, and experimental methods of research. Methods for locating, evaluating, interpreting, and reporting research data. Each student prepares a research prospectus. Offered every semester.

501 Methods and Materials of Research and Study for Elementary Education Majors (3) Historical, descriptive, and experimental methods of research. Methods for locating, evaluating, interpreting, and reporting research data. Introduction to graduate study for elementary majors. Offered every semester.

502 Methods and Materials of Research for Counselor Education Majors (3) Designed to enable the counselor to read experimental, quasi-experimental, descriptive and correlational research reported in the professional journals. Both univariate and multivariate designs are emphasized.

503 The Emerging Curriculum (3) Curriculum trends, beginning in 1951, for grades kindergarten through 12 by means of three comprehensive topics: (1) the curriculum reform movement, (2) emerging curriculum theory and practice, and (3) the educational reform movement. Offered in summer.

504 Middle School Workshop (3) Philosophy, administration, curriculum, staff, and facilities necessary for the most efficient educational experience in the intermediate levels of school. Offered in summer.

505 Individually Prescribed Instruction (3) Individually prescribed instructional techniques as applied in the classroom and intensive learning centers. Techniques of academic diagnosis, prescription production, and electronic learning. Students will have an opportunity to work directly with hardware and software components of an intensive learning center. (May be arranged as a workshop.) Offered in summer.

506 Design and Use of individualized Learning Packages (3) A review of commercially available individualized learning activity packages which permit the student to progress through a learning continuum at his or her own pace. The student will be required to design and construct an individualized learning package in his teaching area. Offered in spring.

507 Values Clarification in Human Relations (3) Knowledge of the theories of the values clarification processes as defined by Simon and others. Skills in application of the values clarification processes in personal decisions, in the classroom, and in society. (May be arranged as a workshop or as modularized independent study.) Offered in summer.

509 Contemporary Teaching Trends (3) Team teaching, programmed instruction, and various media of communication in the elementary and secondary schools are evaluated. Effective adaptation to newer practices is emphasized. Offered in summer.

510 Educational Foundations (3) History of education, integrated with educational philosophy and thought; the long evolution of educational theory and issues. Offered every semester.

515 Federal and State Role in Education (2) The past, current, and future role of the federal and state governments in education in the United States. Emphasis on the applications to the Commonwealth of Pennsylvania. Impact of federal legislation since 1958. Offered in fall.

516 Resource Allocation in the Schools (3) The relationship between the American economy and the efficient allocation of resources within school systems will be examined. Designed for teachers, administrators, school board members, and parents. Offered in summer.

520 Comparative Education (3) Major problems of education in a number of other countries are related to similar problems in the United States. Contrasting purposes and philosophics and differences in organization and administration are analyzed. Offered in fall.

521 Contemporary British Education (3) Consideration of the philosophy of British education today and the ways it has changed in past years. Present-day curricula and philosophies and differences in organization and administration are analyzed. Offered in summer.

523 Education Behind the Iron Curtain (3) Educational structure in the Soviet Union, past, present, and future. Khrushchev's educational reforms and the return to the ten-year school. Educational structure in certain Eastern European countries also included. Offered in summer.

570 The Community/Junior College (3) An analysis of the programs, problems, and students of a two-year college. Emphasis on the development, special philosophies, and current issues relating to the community or junior college. Designed for students preparing to be teachers and/or administrators in these colleges. Offered in spring.

580 History of American Education (3) Nature and direction of American education, studied through individual and group research. Offered in fall.

581 Philosophy of Education (3) Selected philosophies and their influence on educational principles and practices in a democratic social order. Offered in spring.

582 Seminar in the History of the Problems of Education (3) Historical study of the recurrent problems of education and their solutions. Implications of these solutions for contemporary American educational problems. Not to be offered in 1977-78.

589 Sociological Foundations of Education (3) Study of the socio-cultural influences on the structure of American educational institutions. Not to be offered in 1977-78.

590 School Law (3) Legal structure for educational organization on state, intermediate, and local levels. Legal status of the board of education; legal responsibilities of the teacher; legal responsibilities between the board of education and the student. Offered in summer.

EDUCATIONAL PSYCHOLOGY

Symbol EDP

550 Advanced Educational Psychology (3) Processes by which skills, understanding, concepts, and ideals are acquired; teaching practices in relation to basic research concerning learning; similarities and differences in theories of learning. PREREQ: a course in educational psychology, EDF 500. Offered every semester.

557 Essentials of Learning (3) Study of the applications of learning theory to classroom teaching with emphasis on those principles derived from classical and operant conditioning. Retention and transfer of learning also considered. Offered in spring.

559 Constructing and Evaluating Behavioral Objectives (3) Consideration and evaluation of behavioral objectives. Students write and evaluate their own objectives under individual guidance. (May be arranged as a workshop.) Not to be offered in 1977-78.

560 Behavior Modification (3) Study and implementation of principles of classical and operant conditioning to the modification of student behavior in residential and educational settings. Emphasis on such areas as classroom discipline, student values, and student study habits. (May be arranged as a workshop.) Offered in summer.

569 Adolescent Development and Learning (3) Mental, physical, emotional, and social development and behavior of the adolescent with emphasis on various types of learning. Case studies are used. Offered every semester.

SECONDARY EDUCATION

Symbol EDS

502 Secondary School Curriculum (3) Current practices and trends in reorganizing the secondary school curriculum in the major academic areas. The various integrating techniques. Curriculum development. Offered in summer.

506 The Junior High School (3) Development and functions of the junior high school; philosophy underlying its development. Curriculum, teaching assignments, characteristics of pupils, and special problems. PREREQ: a course in adolescent development. Offered in fall.

524 Supervision of Student Teaching (3) Designed for teachers who cooperate or expect to cooperate in West Chester's student teaching program. Basic principles, practices, materials, and resources for an effective student teaching program. PREREQ: certification for teaching. Offered in summer.

590 Independent Study (1-3) Enrollment by permission only; number of credits determined by department.

Special Education

Dr. Freeman, *Chairperson*

PROFESSOR

Howard Freeman, Ed.D., *University of Pennsylvania*

ASSOCIATE PROFESSOR

Martin Zlotowski, Ph.D., *Michigan State University*

ASSISTANT PROFESSOR

Deborah Nickles, M.S., *Syracuse University*

LEVEL I CERTIFICATION PROGRAM: EMOTIONAL DISTURBANCE

This non-degree program is designed for those who are interested in working for certification to teach emotionally disturbed children (K-12). To qualify for the program a student must hold a baccalaureate degree from an accredited college and present an overall cumulative average of 2.75. The program requires a year of graduate work which is taken concurrently with a teaching experience under an Intern Certificate, valid for teaching in Pennsylvania public and private schools. The student's past academic experiences and demonstrated competencies are used to evaluate and determine individually prescribed programs of study, developed from the following offerings: EDA 501, 540, 541, 544, 550, 551, 555.

As of 1975 the program is a periodic, not a regular, offering.

Those interested should make application through the Special Education Office.

COURSE DESCRIPTIONS

Symbol EDA

With the exception of EDA 550 and 551, the following courses may be taken as electives by anyone in a graduate program, subject to approval from the coordinator and the student's chairperson.

501 Prescriptive Teaching (3) An attempt to guide the teacher to an awareness of the methods by which medical, psychological, behavioral, and academic diagnosis may be converted into relevant educational terms providing for adequate follow-through on specific recommendations.

540 Workshop in Special Education (4) An intensive program of observation and instruction of mentally retarded or physically handicapped children. Instructional experience with handicapped children is combined with lecture, demonstration, films, guest speakers, and case study. Primarily for in-service teachers. PREREQ: permission of coordinator.

541 Psychology of Exceptional Children (3) Psychology of children whose intellectual, physical, social, and/or emotional characteristics are significantly deviant from those of children whose needs are met through normal educational routes.

544 Classroom Management (3) Exploration of current practices in the management and modification of behavior. The professional's role in achieving a better basis for meaningful communication with the special child. Problems which may interfere with teacher effectiveness are discussed.

550 Teaching Supervision and Seminar I (6) A graduate practicum required for (and limited to) those enrolled in the program leading to Level I Certification: Emotional Disturbance.

551 Teaching Supervision and Seminar II (6) Continuation of EDA 550. PREREQ: EDA 550.

555 Psychology of Learning Disabilities (3) Identification, education, and treatment of the child with minimal brain dysfunction. Emphasis on recognition of the specific learning and emotional needs which such a child presents.

571 Childhood Learning Disabilities (3) The study and education of the child with perceptual problems and/or minimal brain damage. PREREQ: a course or courses in the psychology of exceptional children.

573 Developmental Assessment of Children with Learning Problems (3) Diagnostic procedures and subsequent educational prescriptions useful with children experiencing learning difficulties.

574 Behavior Management in the Classroom (3) Etiology and implications of behavioral problems in educational settings. Introduction to approaches aimed at producing change.

575 Mental Health in Schools (3) Factors affecting the mental health of both children in the classroom and their teachers. Effective means of identifying and responding to problems are brought out through a seminar approach. The course also explores the effect of mental health on classroom climate.

590 Independent Study (1-3)

Speech Communication and Theatre

Dr. Morehouse, *Chairperson*

PROFESSOR
William M. Morehouse, Ph.D., *Purdue University*

ASSOCIATE PROFESSORS
Jay H. Berkowitz, M.A., *Temple University*
Diane O. Casagrande, M.A., *Temple University*
Myles Martel, Ph. D., *Temple University*

ASSISTANT PROFESSORS

Carolyn M. Del Polito, Ph.D., *Purdue University*
Saundra M. Hall, M.A., *Ohio State University*

COURSE DESCRIPTIONS
SPEECH COMMUNICATION
Symbol: SPC

515 General Semantics (also LIN 515) (3) Introduction to the relativistic language concepts of Korzybski and his followers. The course focuses on what language does to people and the subsequent effects on communication. Offered in fall at night.

517 Producing the Television Program (Nondramatic) (3) Basic concepts of television planning and production for the nondramatic format. The student uses the tools of television. (Lecture and laboratory.) Not offered in 1977-78.

518 Television Program Directing (Dramatic) (3) Continuation and development of skills and knowledge in the use of television equipment; application of the arts of the theatre and film. (Lecture and laboratory.) PREREQ: THA 517. Offered every other spring.

525 Communication in the Classroom: Models and Approaches (3) For teachers in grades K-12 interacting together to share experiences and channel their thoughts into the development of speech communication activities which can fit into and enhance their present curricula. Offered in summer only.

550 Listening: Verbal and Nonverbal Perceptions (3) A survey of research in listening behavior and related nonverbal variables. Identification of important characteristics of effective listeners. Application to communication activities in the classroom. Offered in spring at night.

COURSE DESCRIPTIONS
THEATRE
Symbol: THA

506 Theatre Theory and Production (3) A survey of theatre history and practice. Students select specific areas of production and style for classroom presentation, analysis, and research. Offered in summer only.

510 Theory and Application of Creative Dramatics (3) The use of creative dramatics as a teaching method. Research and application of theories and techniques. Offered in summer only.

550 Summer Drama Workshop (1-6) An intensive combination for formal classroom instruction and applied production experiences. Daily seminar sessions covering a different topic each week will be held at 11:00 a.m. with production applications each afternoon and evening. Graduate students will research production theories and submit scholarly papers at the end of the session.

Speech Pathology and Audiology

Dr. Aungst, *Chairperson*
Dr. Griffith, *Graduate Coordinator*

PROFESSOR

Rita V. Griffith, Ph.D., *Ohio State University*

ASSOCIATE PROFESSORS

Lester F. Aungst, Ph.D., *Pennsylvania State University*
Susan Maxwell, M.A., *Ohio University*
Frank E. Peterson, M.A., *Columbia University*
Vincent V. Suppan, M.A., *Columbia University*

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Charlotte Dempsey, M.A., *University of Illinois*
John L. Eberhart, M.A., *Syracuse University*
Joseph A. Stigora, Ph.D., *Bowling Green University*

The Department of Speech Pathology and Audiology offers the Master of Arts degree in speech pathology. The student may choose a thesis or non-thesis program. Either program is designed to strengthen the knowledge and skill of the practicing speech clinician, to provide the foundation for further graduate study, and to afford opportunity to complete requirements toward professional certification by the American Speech and Hearing Association. Attainment of the master's degree does not necessarily guarantee recommendation for certification.

MASTER OF ARTS IN SPEECH PATHOLOGY

30 Semester Hours

Admission to the Program
In addition to meeting the general requirements for admission to a degree program at West Chester, applicants must:
1. Present an undergraduate background of at least 21 semester hours in the following areas of study: speech and language development, phonetics, introduction to speech disorders, introduction to audiology, and basic speech and hearing science.
2. Demonstrate a reasonable degree of speech and language proficiency.
3. At the discretion of the department, submit Graduate Record Examination scores for purposes of evaluation and guidance.

Admission to Degree Candidacy
1. The applicant may apply for degree candidacy after having completed SPP 501 and two additional departmental graduate courses; application must be made before the student has completed 15 semester hours of graduate work required for the degree.

2. During the pre-candidacy period the applicant must maintain an overall average of at least 2.75 and a minimum average of 3.00 in departmental courses.
3. The applicant must have demonstrated satisfactory performance in clinical practicum.

Requirements for the Degree
1. The candidate must meet the general college requirements for the master's degree, including completion of all required courses with an overall average of at least 2.75 and a minimum average of 3.00 in departmental courses.
2. The candidate must perform satisfactorily on a comprehensive written and/or oral examination, which may not be taken before the student's final semester of course work. Those who fail the examination may repeat it once. The interval between the two examinations may not exceed two years.
3. The candidate must complete satisfactorily SPP 501, three semester hours of graduate clinical practicum (SPP 560),* and 24 additional semester hours, chosen under advisement.

COURSE DESCRIPTIONS

Symbol: SPP

500 Survey of Speech Disorders (3) Description, etiology, and management of communication disorders. Introduction to the field of speech pathology and its interrelationships with other professions. Open to non-majors with no previous coursework in speech pathology. Not open to students with credit for SPP 201 or equivalent. Offered each semester upon sufficient demand.

501 Foundations of Research in Speech Pathology (3) Introduction to the scientific process and to the interpretation and application of research in the speech sciences. A research project outline required. Offered in fall.

504 Aural Rehabilitation (3) Medical, prosthetic, and educational approaches to aural rehabilitation for children and adults. Not open to students with credit for SPP 304 or equivalent. PREREQ: SPP 301 or equivalent. Offered in spring upon sufficient demand.

505 Audiometry (3) A lecture-laboratory course in the measurement of hearing. Not open to students with credit for SPP 305 or equivalent. PREREQ: SPP 301 or equivalent. Offered in spring upon sufficient demand.

506 Equipment Workshop (3) Evaluation, election, use, and maintenance of electronic aids for the speech and hearing clinician. Demonstration of equipment for diagnosis, therapy and classroom use. Students will have ample opportunity to work with tape recorders, auditory trainers and special calibration techniques.

510 Articulation Disorders (3) In-depth study of disorders of articulation. Offered in spring.

511 Voice Disorders (3) Examination of classification, etiology, diagnosis, and therapy for functional, organic, and psychological voice disorders. Offered in spring.

512 Language Disorders of Children (3) Linguistic and neurological aspects of behavior relative to disorders of language in children. In-depth review of etiology, assessment, and treatment. PREREQ: SPP 170 or equivalent. Offered in fall.

*Although the student may elect more than 3 semester hours of clinical practicum for personal objectives, no more than 3 may be counted toward the degree

513 Stuttering (3) Consideration of the nature, causes, diagnosis, and treatment of stuttering and related disorders of speech flow. Critical review of pertinent research. PREREQ: Permission of department. Offered in fall.

514 Aphasia (3) Study of the behaviors associated with language disorders in adults. Emphasis on etiologies, symptoms, assessment and rehabilitative procedures. Offered in spring every other year.

515 Orofacial Anomalies (3) Comprehensive consideration of the nature, causes, diagnosis, and treatment of communication disorders associated with orofacial anomalies, particularly cleft lip and cleft palate. PREREQ: SPP 290 or equivalent, or permission of department. Offered in spring every other year.

516 Neuromuscular Disorders (3) Nature, causes, diagnosis, and treatment of communication disorders associated with neuromuscular dysfunction, with particular attention to the cerebral palsies. Offered every other year; not to be offered 1977-78.

520 Seminar in Speech Pathology (3) Selected theoretical and clinical areas of speech pathology and related disciplines. Topics vary each semester according to research developments and student needs. PREREQ: permission of instructor. Not to be offered 1977-78.

525 Advanced Diagnostic and Therapeutic Methods in Speech Pathology (3) Current and advanced evaluative and therapeutic methods and materials applicable to the diagnosis and remediation of communication disorders. Offered every other year; not to be offered 1977-78.

531 Therapy for the Hearing Impaired (3) Evaluative and therapeutic materials and methods applicable to the improvement of communication in hard-of-hearing individuals. Prereq: SPP 304 or equivalent. offered in fall every other year.

532 Advanced Audiology (3) A lecture-laboratory course which explores clinical techniques for the measurement of hearing. Basic measures are reviewed. Advanced differential techniques are studied with some opportunity to develop competence in administering these tests during lab periods. PREREQ: SPP 305 or equivalent. Offered in spring every other year.

535 Seminar in Audiology (3) Selected areas in audiology and related disciplines. Topics vary each semester according to developments in research and student needs. PREREQ: permission of instructor. Offered every other year; not offered in 1977-78.

550 Experimental Phonetics (3) Advanced study of acoustic and psychoacoustic aspects of sound. Introduction to instrumentation for transmission, analysis, and modification of speech sound. PREREQ: an introductory course in phonetics or equivalent. Offered every other year; not offered in 1977-78.

560 Graduate Clinical Practicum (1) Supervised practice in the Speech and Hearing Clinic and/or in affiliated clinics. Designed to increase diagnostic and therapeutic skills with children and adults who have communication problems. May be repeated. PREREQ: SPP 350 or equivalent and permission of department. Offered each semester.

570 Administration and Supervision of Speech and Hearing Programs (3) Nature and scope of supervisory positions in speech and hearing programs. Emphasis on administrative problems. Offered in fall every other year.

590 Independent Study (1-3) Individualized research projects, reports, and/or readings in speech pathology or audiology under faculty supervision. PREREQ: approval of department chairperson. Offered each semester.

610 Thesis (1-6) Offered each semester.

Teaching English as a Second Language

Dr. Falgie and Dr. Smith, *Coordinators*

Diane O. Casagrande, *Associate Professor of Speech*
W. Stephen Croddy, *Associate Professor of Philosophy*
Joseph Falgie, Jr., *Professor of English and Linguistics*
John T. Kelly, *Associate Professor of English*
Benjamin Nunez, *Professor of Foreign Languages and Linguistics*
Willie E. Page, Jr., *Associate Professor of English*
Philip D. Smith, Jr., *Professor of Foreign Languages and Linguistics*

The Master of Arts in Teaching English as a Second Language is an interdisciplinary program contributed to by the Departments of English, Foreign Languages, Philosophy, and Speech Communication and Theatre. The program is designed for those preparing to teach English to students whose first language is not English. Students wishing to enter the program must consult one of the coordinators.

In addition to meeting the general requirements for a master's degree at West Chester, the candidate must (1) present an acceptable baccalaureate degree which includes at least 24 semester hours in the area of English/Foreign Languages/Linguistics, at least 6 semester hours in the area of Anthropology/Psychology/Sociology, and a course in teaching reading (may be taken as a program elective if lacking); (2) take the verbal and quantitative tests of the Graduate Record Examination or the Miller Analogies Test if deemed necessary; (3) demonstrate adequate proficiency in a foreign language if the student is a native speaker of English or adequate proficiency in English if the student is a non-native speaker of English; and (4) fulfill the course requirements and pass a written and/or oral comprehensive examination, offered on the second Wednesday of October and March.

M.A. IN TEACHING ENGLISH AS A SECOND LANGUAGE (TESL)

33 Semester Hours

Required Courses 24 s.h.
LIN 501-503; LAN 500-502-503; ENG 575-576-577

Students submitting equivalent courses for any of the above may substitute, under advisement, courses from the groups below.

Electives 9 s.h.
Selected from the groups below. At least one course must be selected from Group 1.

Group 1: ENG 579; LIN 540-555-580
Group 2: ENG 578-590; LAN 504-505-585-590-600-610; LIN 504-505-509-512-590; PHI 506-523; SPC 515

With the approval of the coordinators, students wishing to acquire certification in English while enrolled in this program may use up to 6 hours of electives for this purpose.

For descriptions of courses under this program see English (ENG); Foreign Languages (LAN,); Linguistics (LIN); Philosophy (PHI); and Speech Communication and Theatre (SPC).

Urban Education

Coordinator: F. Williams Leeds, *Associate Professor, M.A., University of Pennsylvania*

501 Curricular Adaptions for the Disadvantaged (3) Curricular innovations which attempt to aid the culturally disadvantaged in developing skills necessary for maximal personal adjustment to society. Survey of urban problems and their relationships to inner-city schools.

502 Human Relations in the School and Community (3) Intensive study of the inner-city community and its close relationship with the school society. Analysis of prejudice and its implications to community and school power structures.

590 Independent Study (1-3)

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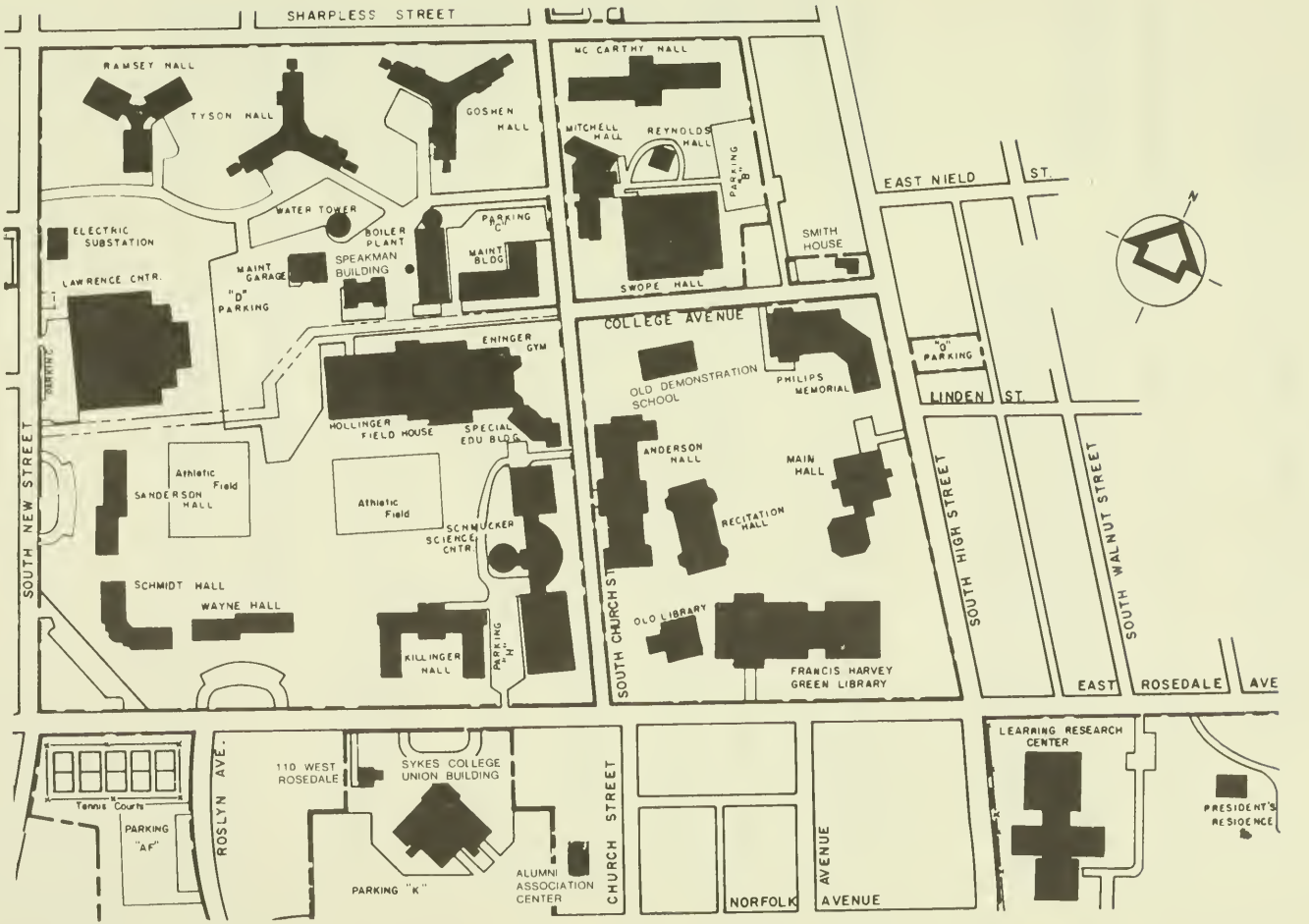

Communications Directory

MAILING ADDRESS:	West Chester State College, West Chester, Pa. 19380
TELEPHONES:	Dial 436 plus number in parenthesis. For Schools, Departments, and other offices not shwon here, call the College Switchboard: 436-1000. Area Career Development Center, Lawrence (2501)

Admission/Catalogs	Dean of Graduate Studies, Administration (2243)
Business/Fiscal Matters	Director of Business Affairs, Phillips (2211)
Cultural Affairs/ College Events	Director of Cultural Affairs and College Events, Lawrence (2935)
Financial Aid to Students	Director of Financial Aid to Students, Lawrence (2627)
Housing	Associate Dean for Student Development, College Union (3305)
Intracollegiate Governmental Association (IGA)	Intracollegiate Governmental Association, College Union (2955)
Library Services	Francis Harvey Green Library (2946)
Placement/Career Services	Career Development Center, Lawrence (2051)
Research/Related Services	Learning Research (2835)
Veterans' Affairs	Office of Veterans' Affairs, Administration (2668)

New Horizons '78

WEST CHESTER STATE COLLEGE

1978 SUMMER GRADUATE COURSES

STRUCTURE OF THE COLLEGE

West Chester State College is composed of six schools each under the direction of a dean. Graduate course offerings are divided among the schools as follows:

School of Arts and Letters

Art
English
Foreign Languages
Philosophy
Speech Communication and Theatre
Speech Pathology and Audiology

School of Education

Counselor Education
Educational Research
Elementary Education
Instructional Media Education
Reading
Secondary Education and Professional Studies
Special Education
Urban Education

School of Health and Physical Education

Health
Health and Physical Education

School of Music

Music Education
Music History and Literature
Music Theory and Composition
Instrumental Music
Keyboard Music
Vocal and Choral Music

School of Sciences and Mathematics

Biology
Chemistry
Earth Sciences
Mathematical Sciences
Nursing
Physical Science

School of Social and Behavioral Sciences

Criminal Justice
Geography and Planning
Government and Politics
History
Psychology

For the convenience of readers the arrangement of course offerings is alphabetical by field or area of study.

All correspondence should be directed to

The Dean of Graduate Studies
Room 205—Ruby Jones Hall
West Chester State College
West Chester, Pa. 19380
Telephone: (215) 436-2243

WEST CHESTER STATE COLLEGE
GRADUATE
SUMMER SESSIONS
1978

ACCREDITATION

West Chester State College is accredited by The Middle States Association of Colleges and Secondary Schools, The National Council for Accreditation of Teacher Education, The American Association for Health, Physical Education and Recreation, The National Association of Schools of Music, The Council on Social Work Education and The American Chemical Society. West Chester State College is a member of The Council of Graduate Schools in the United States.

IMPORTANT NOTES

The times and days of classes are subject to change.

Each summer session offering is contingent upon adequate enrollment and the judgment of the college.

This catalog is not to be regarded as an irrevocable contract between the student and West Chester State College.

Admission to summer session classes does not imply admission to graduate programs.

Fees are subject to change without notice.

West Chester State College is committed to compliance with all applicable Federal and State non-discrimination statutes. Educational programs, activities, and employment at the college are provided without regard to marital status, race, color, national origin, sex, sexual orientation, age or religious creed. In addition, the college attempts to remove any barriers and to provide opportunity for education and employment of handicapped persons. Inquiries regarding compliance with this policy may be directed to Ms. Jeanette Sam, Director of Affirmative Action, Philips Memorial Hall, West Chester State College, telephone (215) 436-2838.

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New Horizons '78 . . .

. . . begin at West Chester State College where there are courses and programs to fill a multitude of needs. Degree and certification programs in approximately forty areas of study and special-interest workshops make summer study at West Chester State a rewarding experience for both those students enrolled in degree programs and those studying for personal or professional enrichment.

West Chester's skyline is silhouetted against the lush Chester County countryside which, though picturesque in its colonial beauty, is still just a short ride from the vital urban centers of Philadelphia and Wilmington, making their research and cultural facilities very accessible. New York City and Washington, D.C. are also easily reached by both public transportation and the interstate highway system.

West Chester State College offers its graduate students the freedom to explore their goals and supplies them with the cool and comfortable research facilities that can make that summer exploration more enjoyable.

Drawing upon the special resources of many of its faculty members, West Chester offers its summer students some special opportunities in a variety of areas. For example, a trip to

England can be turned to credit advantage through a study tour on the geology or the astronomy of England. Some courses will have practical as well as educational value such as Consumer Health Education (HED 506) and Experiences in the Metric System (ISS 506). Still others, Social Rehabilitation of the Offender (CRJ/SWO 543) and TV Production (EDM 535), for instance, are occupation-oriented.

The calendar for West Chester State College's summer sessions is arranged to allow for easy scheduling of classes along with vacations and jobs. Courses are offered in a three-week Pre Session, six-week Regular Session, and three-week Post Session. Graduate courses during the pre-session are offered in the evening for the convenience of teachers.

But it's not just West Chester's summer horizons that are sunny. They're full of promise all year long. For more information on the college and its graduate programs, mail the coupon in the back of this catalog or call the Graduate Office. Chances are, you'll find your lost horizon at West Chester.

Graduate Programs at West Chester

CERTIFICATION AND/OR MASTER OF EDUCATION

Biology
Counselor Education*
  Elementary School Counseling
  Secondary School Counseling
Driver Education and
  Safe Living**
Elementary Education
English
French
Geography
German
Health
Health and Physical
  Education
Instructional Media
  Education
Latin
Mathematics
Reading
Secondary
  Education
Social Science
  Concentrations in:
  Geography
  History
Spanish
Special Education:
  Teaching the
  Emotionally
  Disturbed**
  (Offered periodically, as announced)

MASTER OF ARTS

Biology
English
French
Geography
History
Mathematics
  Options in:
  Pure Mathematics
  Mathematics Education
  Applied Computer Science
Music History
Philosophy
Physical Science
Psychology
Social Science
  Concentrations in:
  Geography
  History
  Political Science
  Psychology
Spanish
Speech Pathology
Teaching English
  as a Second
  Language

MASTER OF MUSIC

Music Education
Music Theory or
  Composition
Performance

MASTER OF SCIENCE

Chemistry
Counseling
Criminal Justice
Educational Research
Health
Health and Physical
  Education
Instructional Media

*At West Chester State College, the master's degree is required for those seeking certification in Counselor Education
**Certification only

GENERAL INFORMATION

West Chester's summer program takes place in three sessions of three, six and three weeks, respectively. Any student taking a summer course at West Chester is entitled to make full use of all the college's resources—and they are extensive.

As one of the largest of the State's 14 institutions of higher learning, West Chester State College is a multi-purpose, comprehensive school now in its second century. Among the many programs offered (shown opposite) are those in teacher education, music, professional preparation, arts and sciences. New courses of study and programs at the graduate level are constantly being developed. For complete details, consult the Graduate Catalog available from the Office of Graduate Studies located in the Ruby Jones Hall or by sending the coupon in the back of this publication.

The Office of Graduate Studies is open Monday through Friday 8:00 a.m. to 4:30 p.m. through May 26. From June through August, the office closes at 4:00 p.m.

HOW TO REACH WEST CHESTER

The Borough of West Chester is easily accessible from all directions both by car and public transportation. Route 3, the West Chester Pike, leads directly into town from center-city Philadelphia. From the Pennsylvania Turnpike, motorists traveling west should take Route 202 south from the Valley Forge Interchange while those traveling east can arrive via Route 100 south from the Downingtown Interchange. From the south, Route 202 from Wilmington and Routes 100 and 52 from U.S. Route 1 all lead to West Chester.

By public transportation, SEPTA buses run from the 69th Street Terminal in Philadelphia into the center of town while trains also operate on a limited schedule from Philadelphia's 30th Street and Suburban Stations to West Chester.

A LOOK AT THE TOWN AND COUNTRY.

Located in a basically agricultural region within easy commuting

distance of several major metropolitan areas, West Chester offers the best of the worlds of city, country, small town and suburbia. A community of approximately 20,000, the town is about 25 miles west of Philadelphia and 17 miles north of Wilmington, Delaware. The interstate highway system and good rail connections make New York City and Washington, D.C. also easily accessible.

West Chester is the county seat of Chester County and the hub of activity for the surrounding area. It is a marketing, banking, social services and library center as well as a focus of light industry.

Despite recent rapid growth, West Chester retains its own special flavor and historical dignity. Originally settled by the Quakers during colonial times, the town still has streets lined with well-kept 19th Century brick houses, many with detailed ornamental iron decoration from nearby forges. West Chester residents are proud of their historical com-

munity and take care in preserving its many architectural gems including public buildings, churches and homes.

History, art and architecture buffs can have a real field day . . . and another and another . . . in Chester County. Within short driving distance are Valley Forge, Longwood Gardens, a Mushroom Museum, the Brandywine River Museum (full of paintings by the Wyeth family and other members of the Brandywine School) and the Brandywine Battlefield.

Other nearby points of interest include Anthony Waynes' farm home (Waynesborough) and his grave at St. David's Church, the house once occupied by poet Sidney Lanier, the Mason & Dixon Star-gazer's Stone, St. Peter's village noted for its old houses and quaint shops, and numerous beautiful and interesting houses and barns for which the county is highly famed.

Chester County's enthusiasm for its many cultural and historical sites is contagious so that even those whose interests generally lie in other areas are often soon caught up in the flavor and feeling of the area.

HOUSING.

If you would like to live on campus while attending summer school, West Chester has attractive, well-appointed high-rise residence halls. These are conveniently near Lawrence Center where the dining room, post office and snack bar are located and the new Sykes College Union Building with its well-stocked store, lounges, recreation facilities and snack bar. In addition each dormitory has lounge, TV and recreation areas.

After you have completed scheduling, apply for a room by writing to the Associate Dean of Students Office, Room 206, Sykes College Union. This written application must be received at least one week prior to the beginning of the session for which housing is required. Housing is not available for married students.

FRANCIS HARVEY GREEN LIBRARY.

With a collection of more than 320,000 volumes and subscriptions to more than 2,500 journals, West Chester's library is a valuable resource for study and research. The general collection is augmented by an extensive micromedia collection representing an additional 300,000 titles along with facilities for reading this material.

The Special Collections Room houses the Chester County Collection of scientific and historical books; the Normal Collection (historical books on physical education and publications by and about the faculty and alumni); *The Biographies of the Signers of the Declaration of Independence* by John Sanderson; and the Shakespeare Folios.

Other collections of note include a variety of audio-visual materials in

the Instructional Materials Center; a comprehensive music library in Swope Hall; the Philips Autographed Book Library housed in a specially designed room in the Philips Memorial Building; and separate collections of children's literature and government documents.

RECREATION SERVICES.

For those who like to get away from it all, West Chester has interesting cultural, social, and sports activities in the summer. Recreation Services—the office responsible for meeting the leisure-time needs of summer students—arranges such regular features as excursions to Robin Hood Dell in Philadelphia, Longwood Gardens and professional baseball games.

Recreation equipment is available to summer students. Items for loan range from tennis rackets, baseball equipment, volleyballs, softball bats and balls, to tents and sleeping bags. If you want to shop uptown, or just pedal around and enjoy the scenic beauty of Chester County, you can also borrow a bicycle. The equipment is loaned from Ehinger Gymnasium.

If you like your exercise competitive, there are intramural softball and volleyball leagues for both men and women.

Social programs include dances, student-faculty coffee hours, music programs and a cinema series.

The following facilities are open for informal recreation use: Hollinger Gymnasium (College Avenue), the tennis courts on both North and South Campus, Ehinger Gymnasium, and Recreation Park, behind Sanderson Hall. Swimming will be provided as facilities are available.

For details, phone or see the Coordinator of Recreation Services, South Campus (436-2133).

PLACEMENT SERVICES.

The college maintains an active Career Development Center for its students. Notices of opportunities for employment in teaching and other careers are posted regularly, and counseling in career planning is available to all students (See the Graduate Studies Catalog). There is no charge for these services. Location: Lawrence Center.

EMPLOYMENT AND LOANS.

If you are interested in part-time or hourly work on campus or in the community, communicate with the director of financial aid to students, Lawrence Center. He is also the person to see for information about loans.

STUDENT HEALTH SERVICE.

To meet emergency and first-aid needs and to perform routine infirmary treatment of minor illness and minor surgical conditions, two

part-time physicians and a staff of registered nurses are available at no cost to students. Beyond these services, the college does not furnish medical care nor bear the costs of medical or surgical treatment or hospitalization. The community of West Chester has qualified physicians and excellent hospital facilities. The Health Service is in Reynolds Hall.

Summer students may take advantage of a group medical and accident policy, approved by the college and covering them for the 12 weeks of the summer session, at a minimal premium. See the Health Service.

THE COUNSELING CENTER.

The professional counseling and psychological services of the Counseling Center are available to students needing assistance regarding educational, vocational, personal, social and emotional concerns. The counseling psychologists who staff the center are experienced in counseling, personality evaluation and administration of psychological tests. Assistance is provided through both individual and group approaches, depending upon student need. All conversations and test results are confidential. Location: Lawrence Center.

VETERANS' AFFAIRS.

West Chester is an accredited college for the education of veterans and maintains an Office of Veterans' Affairs. To apply for benefits, veterans should visit this office, located in the Learning and Research Center.

APPLYING FOR ADMISSION FOR THE ACADEMIC YEAR.

The Office of Graduate Studies will be glad to give you an application form and a Graduate Preview in which you will find admission requirements as well as information about the college's degree programs.

SUMMER SESSIONS FEES & EXPENSES

Special Note:

The fee schedule listed below was adopted, after a lengthy delay on appropriations in Harrisburg, for the Spring Semester, 1978. Although this same schedule is expected to apply for the 1978 Summer Sessions, it must be noted that fees are subject to change without notice.

For more up-to-date information at any given time, contact Student Accounts Office, 436-2552.

All charges for a session must be paid on the day of registration.

(Unless otherwise specified, fees are paid by check or money order payable to: Commonwealth of Pennsylvania. Your check or money order serves as your receipt.)

Basic Fee (Pennsylvania Residents)

$51 per semester hour of credit.

Basic Fee (Out-of-State Students)

$75 per semester hour of credit.

Housing Fee (Rooms and Meals)

Regular Session: $210
Pre or Post Session: $105
No reduction for absences of a few days.
Private rooms: $5 extra per week. Charges for individual meals: breakfast 75¢, lunch $1.00, dinner $1.50.

Community Center Fee

$1.00	Pre or Post Session
$2.00	Regular Session

Music Instruction Fee

(Regular Session)
Piano, Organ, Instrument, or Voice—two half-hour lessons per week: $55
Instrument Class or Ensemble: $35

Pipe Organ for Practice

Regular Session: $12
Pre or Post Session: $6
(No charge for piano for practice)

Rental of Band or Orchestral Instruments

Regular Session: $6
Pre or Post Session: $3

Late Registration Fee

The $10 late registration fee is charged to students who register after classes begin.

Refunds

All refund requests must be made **in writing** during the session for which a refund is requested. Contact the Graduate Office, 2nd floor, Ruby Jones Hall.

Basic Fee Refunds:

Withdrawals during the first week of Pre and Post Sessions—a 50% refund.
Withdrawals during the first and second week of Regular Session—a 50% refund.
There is no refund of the basic fee after the first week of Pre or Post Session, and after the second week of Regular Session.
The Community Center Fee is not refundable.

ACADEMIC INFORMATION

CREDITS

Credits are usually earned at the rate of one semester hour for each week of summer session. A student attending all three sessions normally earns 12 credits.

West Chester students wishing to carry more than six semester hours in Regular Session must secure permission from their advisors.

WITHDRAWAL FROM A COURSE IN SUMMER SESSION

Students who stop attending classes in which they are enrolled will receive a WP or a WF for the course if they have filed the proper withdrawal forms. In order to withdraw officially from summer session classes, a student must submit a completed summer session withdrawal form to the Graduate Studies Office before the end of that summer session.

WITHDRAWAL FROM THE COLLEGE

A student intending to withdraw completely from the graduate program must give the dean of graduate studies written notice stating the reason for the withdrawal. The student's last day in classes will be considered the student's termination date.

COLLEGE REGULATIONS AND POLICIES

The class-absence policy for the academic year applies in summer.

All academic policies are as noted in the Graduate Studies Catalog.

HOW TO SCHEDULE & REGISTER

PERMITS TO REGISTER for the Summer Sessions will be mailed to all students presently enrolled in graduate courses and to those on the mailing list under seperate cover.

Graduate students may schedule for **any** of the summer sessions from May 8 through May 11, 1978. If you are a new student or did not receive a PERMIT TO REGISTER through the mail, please contact:

The Graduate Office
Room 205
Ruby Jones Hall
215-436-2243

PLEASE NOTE: You have completed the **Scheduling** process when your PERMIT TO REGISTER, properly completed and bearing **both** your signature and a signature from the appropriate department, has been returned to the Office of Graduate Studies. Improperly signed PERMITS TO REGISTER will be returned to you. A **Scheduling** period (May 8-11, 1978) has been established so that the students may complete the scheduling process prior to the registration period and avoid possible delays.

You have completed the **Registration** process only when your records have been entered into the college data bank and when you have paid your bill.

No bills will be mailed to students enrolling in the Summer Sessions. Please consult the calendar printed below to learn how to complete registration for each summer session.

TO SCHEDULE

1. Contact your advisor, complete your PERMIT TO REGISTER, obtain the necessary signature(s) and sign the card yourself.

Note any restrictions on course enrollment printed in the course listing. If you have any questions, please contact the Office of Graduate Studies.

2. Return your signed PERMIT TO REGISTER to the Office of Graduate Studies. No bill will be mailed to you.

CALENDAR FOR SUMMER SESSIONS REGISTRATION INFORMATION

May 8 (Monday) through May 11 (Thursday) — Scheduling for any summer session

June 1 (Thursday) — 2:00-6:30 pm Scheduling for Pre-Session only
2:00-7:00 pm Registration for Pre-Session only

If you have scheduled for Pre-Session, go directly to Lawrence Center, get your bill and pay it. If you are a new student or do not have a PERMIT TO REGISTER, report to the Graduate Office in the Ruby Jones Hall to obtain a PERMIT TO REGISTER, see your advisor, return your signed PERMIT TO REGISTER to the Office of Graduate Studies, obtain a business office card, go to Lawrence Center and pay your bill.

June 5 (Monday) — Classes begin
Office of Graduate Studies will be open until 7 pm.
The late registration fee of $10 will be assessed all graduate students whose registrations for Pre-Session are processed on or after this date. Drop & Add Period for Pre-Session only

June 22 (Thursday) — Scheduling for Regular Session only 2:00-6:30 p.m.
Registration for Regular Session only.
Lawrence Center
2:00-7:00 p.m.

If you have scheduled for Regular Session, go directly to Lawrence Center, get your bill and pay it. If you are a new student or do not have a PERMIT TO REGISTER, report to the Office of Graduate Studies in the Ruby Jones Hall to obtain a PERMIT TO REGISTER, see your advisor, return your signed PERMIT TO REGISTER to the Office of Graduate Studies, obtain a business office card, go to Lawrence Center and pay your bill.

June 26 (Monday) — Undergraduate registration for Regular Session

June 27 (Tuesday) — Classes begin
Office of Graduate Studies open until 7 pm

Drop & Add period for Regular Session only

The late registration fee of $10 will be assessed all graduate students whose registrations for Regular Session are processed on or after this date.

August 3 (Thursday)

Scheduling for Post Session only 2:00-3:30 pm

Registration for Post Session only. Lawrence Center 2:00-4:00 pm.

If you have scheduled for Post Session, go directly to Lawrence Center, get your bill and pay it. If you are a new student or do not have a PERMIT TO REGISTER, report to the Office of Graduate Studies in Ruby Jones Hall to obtain a PERMIT TO REGISTER, see your advisor, return your signed PERMIT TO REGISTER to the Office of Graduate Studies, obtain a business office card, go to the Lawrence Center and pay your bill.

August 8 (Tuesday)

Classes begin

Drop and Add Period for Post Session only.

The late registration fee of $10 will be assessed all graduate students whose registration for Post Session are processed on or after this date.

Pre Session

Monday, June 5 through Friday, June 23

See the 1977-1978 Graduate Studies Bulletin for course descriptions. NEW, following a course listing indicates a course not previously offered or currently described. Descriptions for these courses appear in this publication beginning on page 38. All offerings listed are contingent upon sufficient enrollment. Semester hours of credit are shown in parentheses following the course title. Classes meet Monday through Thursday unless otherwise noted.

Art

4:30-7:30 p.m.

ART 531, 532, 533, 534—Ceramics Workshop (3) (See "Summer Workshops/Other Special Offerings")

Biology

4:30-7:30 p.m.

BIO 559—Advanced Human Anatomy (3)

7:00-10:00 p.m.

BIO 503—Mammalian Physiology (3)

Chemistry

4:30-7:30 p.m.

CHE 504—Foundations of Nutrition (3) (Not for M.S. in Chemistry)

To Be Arranged

CHE 505—Fundamental Topics in Chemistry (3) Topic: Organic Chemistry or Physical Chemistry (Not for M.S. in Chemistry)

Counselor Education

May 30, 1978 to June 29, 1978

4:30-7:00 p.m.

EDC 520—Counseling for Human Differences (3)
EDC 531—Intro. to Counseling in Higher Ed. (3)
EDC 567—Group Dynamics (3)
EDC 575—Group Procedures in Sec. School (3)
EDC 590—Practicum in Elem. Guidance (3)

7:15-9:45 p.m.

EDC 540—Assessment Methods in Guidance (3)
EDC 556—Career Development Theories and Practices (3)
EDC 567—Group Dynamics (3)
EDC 569—Professional Counselors in the Sec. School (3)
EDC 573—Counseling and Consultative Techniques in Secondary School (3)

Criminal Justice

5:00-9:00 p.m.

CRJ 507—Conflicts in the Criminal Justice System (3) Mon. through Thu.

Earth Sciences

6:00-9:00 p.m.

ESS 523—General Geologic Field Studies of Southeastern Pennsylvania (3)

To Be Announced

ESS 591—Independent Study (Field Projects) (1-3) (Must have permission of Instructor-Ehleiter)

Elementary Education

6:00-9:30 p.m. Mon. through Thu.

EDE 530—Social Studies in Elementary Education (3)
EDE 543—Creative Expressions in the Elementary School (3)
EDE 584—Workshop in Early Childhood Education (3)
EDE 585—Workshop in Language Arts (3)
EDE 695—Seminar in Elementary Education (3)

English

6:00-9:30 p.m.

ENG 541—Twentieth Century Drama (3)

Foreign Languages

Mon. 4:00-6:00 p.m.

SPA 513—Advanced Oral Spanish (3)

Mon. 6:00-9:30 p.m.

LAN 502—Second Languages in the Elementary School (3) For application, consult Dr. P. D. Smith, Jr., Joint Coordinator, English-as-a-Second Language.

Health

(See also Physical Education)
All Permits to Register must be signed by Dr. Edward N. Norris.
Telephone scheduling:
May 8, 2-5 p.m.
May 9, 9-11 a.m.
In person scheduling:
May 10, 4-6 p.m.
May 11, 6-8 p.m.

6:00-9:45 p.m. Mon. through Thu.

HED 521—Sociological Bases for Health (3) (Formerly HED 567)
HED 623—Addictive Diseases (3) (Formerly HED 569)

History

6:00-9:30 p.m.

HIS 501—History of South Asia (3)
HIS 551—Revolutionary America: 1763-1789 (3)

Instructional Media Education

6:00-9:30 p.m.

EDM 502—Selection & Effective Utilization of Educational Media (3)
EDM 505—Motion Picture in Education (3)
EDM 522—Production of Non- Projected and Projected Materials (3)
EDM 555—Learning Theory Related to Educational Media (3)

Mathematics

6:00-9:30 p.m.

MTE 560—Teaching Algebra in Secondary School (3)
MTE 569—Seminar for Elementary School Teachers (3) (Teaching the Gifted Child in Elementary and Middle School).

Music*

6:00-9:30 p.m.

MUS 511—Vitalizing Music in the Elementary School (3)

*School of Music
Counseling by telephone or office appointment Call or write Dr Singleton 8 00 a m -4 30 p m , April 24-May 11, Swope Hall, Room 11, phone 436-2539 **All Permits-to-Register** must be signed by Dr Singleton

Physical Education

(See also Health Education)
All Permits to Register must be signed by Dr. Edward N. Norris.
Telephone scheduling:
May 8, 2-5 p.m.
May 9, 9-11 a.m.

In person scheduling:
May 10, 4-6 p.m.
May 11, 6-8 p.m.

6:00-9:45 p.m. Mon. through Thu.

PED 552—Learning on the Move (3) (Formerly PED 572)
PED 577—Summer Dance Workshop/Effective Projection in Theatre Dance (1) (Formerly PED 536) THREE WEEKS SESSION: June 19-July 7, Tue. and Thu. 7:00-10:00 p.m.
PED 580—Sports Psychology (3) (Formerly PED 521)
PED 582—Modern Principles of Athletic Training (3) (Formerly PED 534)
PED 660—History and Philosophy of Safety Education and Principles of Accident Prevention (3) (Formerly PED 580)
PED 683—Comparative Physical Education (3) (Formerly PED 571)

Physics

4:30-6:50 p.m.

PHS 502—Modern Trends in Teaching Physical Science (2)

Psychology

5:00-8:30 p.m.

PSY 505—Advanced General Psychology (3)
PSY 507—Advanced Child Psychology (3)
PSY 530—Human Sexual Behavior (3)

Reading

4:30-7:00 p.m.

EDR 511 Current Practices in Developmental Reading (3)
EDR 521 Reading Clinic Practicum & Seminar I (3)
EDR 521 Reading Clinic Practicum & Seminar I (3)

Secondary Education and Professional Studies

6:00-9:30 p.m.

EDF 500—Methods and Materials of Research (3)
EDF 510—Educational Foundations (3)
EDF 520—Comparative Education (3)
EDF 590-School Law (3)
EDS 506—The Junior High School (3)
EDU 502—Human Relations in the School and Community (3)

Social Work

Six-Week Session in Social Work (See description in "Workshops/Other Special Offerings")

5:30-8:30 p.m. June 5 through July 14

SWO 521—Social Group Work with Women in Transition (3) NEW Mon. and Wed.
SWO 522—Family Therapy in Social Work (3) NEW Tue. and Thu.

Speech Pathology and Audiology

6:00-9:30 p.m.

SPP 506—Equipment Workshop (3)

Regular Session

Monday, June 26 through Friday, August 4

See the 1977-1978 Graduate Studies Bulletin for course descriptions. NEW, following a course listing indicates a course not previously offered or currently described. Descriptions for those courses appear in this publication beginning on page 38. All offerings listed are contingent upon sufficient enrollment. Semester hours of credit are shown in parentheses following the course title. Classes meet each weekday (unless otherwise shown) during Regular Session except July 3 and 4.

Art

8:00-9:30 a.m.

ART 546, 590—Drawing: Independent Projects (3)

ART 531, 532, 533, 534—Ceramics Workshop (3) (See "Summer Workshops/Other Special Offerings")

ART 551—Art Education in the Elementary School (3)

9:30-11:00 a.m.

ART 516, 517, 520—Painting Workshop (3) (See "Summer Workshops/Other Special Offerings")

11:00 a.m.-12:30 p.m.

ART 531, 532, 534—Ceramics Workshop (3) (See "Summer Workshops/Other Special Offerings")

Biology

8:00-9:00 a.m.

BIO 550—Seminar in Organismic Biology (2)

9:00-10:00 a.m.

BIO 500—Materials and Methods of Biological Research (2)

9:00 a.m.-Noon, 1:00-3:00 p.m.

BIO 517—Summer Birds (1) July 10 through July 14. (See "Summer Workshops/Other Special Offerings")

BIO 516—Summer Wildflowers (1) July 17 through July 21. (See "Summer Workshops/Other Special Offerings")

BIO 515—Common Trees of Chester County (1) July 24 through July 28. (See "Summer Workshops/Other Special Offerings")

BIO 512—The Living Forest (1) July 31 through August 4. (See "Summer Workshops/Other Special Offerings")

10:00-11:30 a.m.

BIO 528—Animal Histology (3)

11:30 a.m.-12:30 p.m.

BIO 581—Microtechnique Laboratory (1)

Chemistry

8:00-9:00 a.m.

CHE 503—Chemistry of the Environment (2) NEW For Majors and Non Majors Prerequisite: 1 year General Chemistry (See CHL 503 for Laboratory)

9:30-11:00 a.m.

CHE 513—Geochemistry (3)

SCI 570—Science and Human Values (3)

CHE 571—Fundamentals of Biochemistry (3)

11:00 a.m.-12:30 p.m.

CHE 508—Industrial Pollution (3)

4:30-5:45 p.m.

CHE 579—Chemical Toxicology (4) NEW Mon. through Thu. Laboratory 6-10 p.m. Tue. through Thu.

CHE 585—Theory and Practice of Spectrophotometry (4) NEW Mon. through Thu. Laboratory 6-10 p.m. Tue. through Thu.

To Be Announced

CHE 590—Independent Studies in Chemistry (1-6)

CHE 610—Research and Thesis (2-6)

To Be Arranged

CHE 505—Fundamentals Topics in Chemistry (3) Topic: Organic Chemistry, Physical Chemistry or Analytical Chemistry (Not for M. S. in Chemistry)

11:30 a.m.-3:30 p.m.

CHL 503—Environmental Chemistry Laboratory (2) NEW Tue. through Thu. (Visit to industries may be scheduled during laboratory periods)

CHL 571—Experimental Biochemistry (2) Tue. through Thu.

Counselor Education

July 5, 1978 to August 4, 1978

4:30-7:00 p.m.

EDC 567—Group Dynamics (3)

EDC 571—Theories of Counseling (3)

EDC 568—Professional Counselors in the Elementary School (3)

EDC 585—Contemporary Issues and Trends in Guidance (3)

7:15-9:45 p.m.

EDC 503—Intro. to Guidance Services (3)

EDC 530—The College Student (3)

EDC 578—Counseling Techniques with Adults (3)

EDC 591—Practicum in Secondary Guidance (3)

Criminal Justice

5:30-8:30 p.m.

CRJ/SWO 543—Social Rehabilitation of the Offender (3) Tue. and Thu. (See Workshops/Other Special Offerings)

6:30-10:00 p.m.

CRJ 540—Foundations of Criminal Justice (3) Mon. and Wed.

Earth Sciences

8:00-9:30 a.m.

ESS 501—Earth Science in Secondary School (3)

SCE 595—Instruction in Elementary Science (3)

9:30-11:00 a.m.

ESS 526—Geology of Petroleum (3)

ESS 580—Astronomy of England (3) (includes two week field trip to England) Must have permission of instructor-Reed)

PHS 510—FUSE Workshop (3) (Formerly PHS 510)

SCE 500—Modern Trends in Science Education (3)

11:00 a.m.-12:30 p.m.

ESS 521—Geology in the Elementary School (3)

ESS 581—Geology in England (3) (Includes two weeks field trip to England) Must have permission of instructor-Greenberg)

ESS 540—Meteorology (3)

Elementary Education

8:00-9:30 a.m.

EDE 551—Child Development and Behavior I (3)

EDE 565—Effective Classroom Man-

agement (3)
EDE 570—Supervision in Elementary School (Workshop) (3)
EDE 583—Workshop in Creativity (3)

9:30-11:00 a.m.

EDE 543—Creative Expression in Elementary School (3)
EDE 548—Curriculum Theory & Trends in Elementary Education (3)
EDE 560—Meeting Individual Needs of Children (3)
EDE 587—Workshop in Affective Education (3)

11:00 a.m.-12:30 p.m.

EDE 502—Introduction to Early Childhood Education (3)
EDE 522—Teaching the Communication Skills (3)
EDE 588—Workshop in Gifted and Talented (3) NEW

6:00-9:30 p.m.

EDE 561—Guidance in the Elementary School (3) Mon. and Wed.

English

8:00-9:30 a.m.

ENG 507—Literature Seminar: Joyce (3)
ENG 508—Writing Seminar: Teaching Composition (3)

9:30-11:00 a.m.

ENG 525—Shakespeare: Tragedy and History (3)
ENG 579—Studies in American English (3)

11:00 a.m.-12:30 p.m.

ENG 570—British and Continental Short Story (3)
ENG 593—Literature for the Secondary School (3)

Foreign Languages

8:00-9:30 a.m.

LAN 580.01—Seminar in Second Language Education (3) (Teaching Reading to Non-English Speakers) For application, consult Dr. P. D. Smith, Jr., Joint Coordinator, English as-a-Second Language.

Mon. through Fri. 9:00 a.m.-5:00 p.m., and Sat. 9:00 a.m.-Noon

LAN 580.02—Individualizing and Personalizing Foreign Language Instruction (2 or 3) June 26 through July 1 (See "Summer Workshops/Other Special Offerings"). Students may participate in another course offered in regular session if prior permission is acquired.

11:00 a.m.-12:30 p.m.

FRE 590—Independent Study (3)
SPA 512—Advanced Spanish Grammar and Stylistics (3)

To Be Arranged

GER 590—Independent Study (3) Included in German Majors Program, i.e., students must register with Mr. Ronald L. Gougher, Department of Foreign Languages

Geography and Planning

8:00-9:30 a.m.

GEO 503—General Climatology (3)

6:00-10:00 p.m.

GEO 505—Advanced Cartography (3) Tue. and Thu.
GEO 526—Metropolitan Systems and Problems (3) Mon. and Wed.

To Be Arranged

GEO 571—Conservation Workshop (3) (See Workshops/Other Special Offerings)

Government and Politics

6:45-10:00 p.m.

PSC 541—Latin American Culture and Politics (3) Tue. and Thu.

Health

(See also Physical Education)
All Permits to Register must be signed by Dr. Edward N. Norris.
Telephone scheduling:
May 8, 2-5 p.m.
May 9, 9-11 a.m.
In person scheduling:
May 10, 4-6 p.m.
May 11, 6-8 p.m.

8:00-9:00 a.m.

HPE 600—Methods and Materials of Research in Health and Physical Education (2) (Formerly PED 500)

8:00-9:30 a.m.

HPE 601—Techniques of Measurement and Evaluation in Health and Physical Education (3) (Formerly PED 561)
HED 523—Consumer Health Education (3) (Formerly HED 572)

9:30-11:00 a.m.

HPE 606—Research Project Seminar I (2) (Formerly PED 591)
HPE 607—Research Project Seminar II (1) (Formerly PED 592)
HPE 608—Thesis Seminar (2) (Formerly PED 593)
HPE 610—Thesis (4) (Formerly PED 610)
HED 622—Principles of Curriculum and Instruction in Health Education (3) (Formerly HED 544)

11:00 a.m.-12:30 p.m.

HPE 602—Historical and Philosophical Bases for Health and Physical Education (3) (Formerly PED 550)
HED 620—School Health Problems (3) (Formerly HED 540)

History

9:30-11:00 a.m.

HIS 500—Methods and Materials of Research in History (3)
HIS 509—Contemporary History of the Middle East (3)

11:00 a.m.-12:30 p.m.

HIS 558—Recent American Diplomatic History (3)

To Be Arranged
HIS 660—Field Studies in India (6) (See Workshops/Other Special Offerings)

Instructional Media Education

8:00-9:30 a.m.

EDM 520—Designing Instructional Materials (3)
EDM 526—Intermediate Photography (3)

9:30-11:00 a.m.

EDM 519—Library Science (3)
EDM 522—Production of Non-Projected and Projected Materials (3)
EDM 560—Organization and Administration of Educational Media (3)

11:00 a.m.-12:30 p.m.

EDM 501—Orientation to Educational Media (3)
EDM 525—Photography for Teachers (3)
EDM 529—Instructional Use of the 8mm Motion Picture Camera (3)

By Appointment
EDM 535—Instructional TV Production I (3)
EDM 590—Internship Program in Educational Media (2)

Mathematics

8:00-9:30 a.m.

MAT 501—Fundamental Concepts of

Mathematics I (3)
MTE 502—Fundamental Concepts of Mathematics II (3)
MAT 512—Modern Algebra (3)

9:30-11:00 a.m.

CSC 501—Introduction to Computers (3)
CSC 595—Topics in Computer Science (APL Programming) (3)
MAT 532—Modern Geometry (3)
MAT 541—Advanced Calculus (3)

11:00 a.m.-12:30 p.m.

MTE 507—Current Trends in Teaching Mathematics I (3)
MTE 550—Topics in Mathematics for Elementary School Teachers (3)
STA 525—Probability (3)
ISS 505—Experiences in the Metric System (1)-July 10-14, 1:00-3:45 p.m.
ISS 505—Experiences in the Metric System (1)-July 17-21, 1:00-3:45 p.m.
ISS 506—Metrics for Classroom Use (1) July 24-28, 1:00-3:45 p.m.
ISS 516—Using Programmable Calculator in the Mathematics Classroom (2) July 10-21, 1:00-3:45 p.m.

Music*

8:00-9:30 a.m.

MUS 605—Vocal Literature (3)
MUS 660—Electronic Music (3)

9:30-11:00 a.m.

MUS 591—Vocal Pedagogy (3)
MUS 626—History of Chamber Music (3)
MUS 632—Music of the Renaissance Period (3)

11:00 a.m.-12:30 p.m.

MUS 501—Aspects of Musical Style I (3)
MUS 502—Aspects of Musical Style II (3)
WEN 546—Woodwind Ensemble (2)
MUS 551—Accompanying (3)

12:30-2:00 p.m.

MUS 592—Marching Band Techniques and Materials (3)

By Appointment

MUS 559-560—Private Instruction, **Minor Level (1)
MUS 561-564—Private Instruction, **Major Level (1)
MUS 565-569—Private Instruction, **Advanced Level (2)
**Performance area prefixes: PIA, VOI, ORG, VLN, VLA, VCL, BAS, FLU, OBO, ENH, CLT, SAX, BSN, HRP, FRH, TPT, TRB, BAR, TBA, PER.
MUS 691—Research Seminar in Music (2)
MUS 692—Research Seminar in Music (1)
MUS 696—Recital (1)
MUS 697—Recital (2)
MUS 698—Research Report (1)
COM 699—Musical Composition (3)
MUS 699—Thesis (3)

NEW SCHEDULE THREE-WEEK COURSES IN MUSIC

Each of these courses meets Mon. through Fri. at times indicated.

June 26 through July 14

8:00-11:00 a.m.

MUS 503—Philosophical Foundations of Music Education (3)
MUS 510—Current Trends in Music Education (3)
MUS 522—Music in the Middle School (3)
MUS 608—Brass Literature (3)

July 17 through August 4

8:00-11:00 a.m.

MUS 500—Methods and Materials of Research (3)

*School of Music
Counseling by telephone or office appointment. Call or write Dr. Singleton 8:00 a.m.-4:30 p.m., April 24-May 11, Swope Hall, Room 11, phone 436-2539. **All Permits-to-Register** must be signed by Dr. Singleton.

MUS 516—Administration and Supervision of School Music (3)

8:00-9:30 a.m.

ICO 556-557—Advanced Instrumental Conducting (2)

12:30-2:00 p.m.

CCO 556-557—Advanced Choral Conducting (2)
ORC 542-545—Orchestra (1)

2:00-3:15 p.m.

CHO 542-545—Chorus (1)

3:15-4:30 p.m.

BND 542-545—Band (1)

Workshop

MUS 513—Music Education in the Elementary School (3) or
MUS 514—Music Education in the Secondary School (3)
July 17 through July 21 (see description in "Summer Workshops/Other Special Offerings").

Physical Education

See Health for required HPE Courses.

(See also Health Education)
All Permits to Register must be signed by Dr. Edward N. Norris.
Telephone scheduling:
May 8, 2-5 p.m.
May 9, 9-11 a.m.
In person scheduling:
May 10, 4-6 p.m.
May 11, 6-8 p.m.

8:00-9:00 a.m.

PED 550—Elementary Physical Education Workshop (3) (Formerly PED 502)

9:30-11:00 a.m.

PED 586—The Olympic Games (3) (Formerly PED 573)
PED 681—Scientific Bases for Physical Education (3) (Formerly PED 530)

6:00-8:00 p.m.

PED 680—Scientific Principles of Coaching (3) (Formerly PED 520) Mon. through Thu.

6:00-9:45 p.m.

PED 663—Psychology in Safety Education and Accident Prevention (3) (Formerly PED 583) THREE WEEKS SESSION, June 26-July 13, Mon. through Thu.
PED 560—Seminar in Motorcycle Safety Education (3) (Formerly PED 584) THREE WEEKS SESSION, July 17-August 3, Mon. through Thu.

Physics

11:00-12:30 p.m.

PHS 580—Energy Conversion and Utilization (3) (If Approval Received via Curriculum Committee)

Psychology

6:00-9:30 p.m.

PSY 501—Introductory Statistics for the Behavioral Sciences (3) Mon. and Wed.
PSY 508—Advanced Adolescent Psychology (3) Tue. and Thu.
PSY 512—Psychology of Personality (3) Mon. and Wed.
PSY 524—Psychometrics (3) Mon. and Wed.
PSY 527—Behavior Modification (3) Tue. and Thu.

Psychology

To Be Arranged

PSY 600—Research Report (2)
PSY 610—Thesis (3)
PSY 615—Clinical Practicum in Psychology (2-6)
PSY 620—Practicum in School Psychology (3-15)

Reading

8:00-9:30 a.m.

EDR 516—Reading Disabilities (3)

9:30-11:00 a.m.

EDR 510—Foundations of Reading Instruction (3)
EDR 522—Reading Clinic Practicum & Seminar II (3)
EDR 541—Organization and Operation of Reading Programs K-12 (3)

11:00 a.m.-12:30 p.m.

EDR 522—Reading Clinic Practicum & Seminar II (3)
EDR 525—Reading for the Disadvantaged (3)
EDR 526—Reading Readiness and Early Childhood Experience (3)
EDR 541—Organization and Operation of Reading Programs K-12 (3)

Secondary Education and Professional Studies

8:00-9:30 a.m.

EDF 500—Methods and Materials of Research (3)
EDF 501—Methods and Materials of Research for Elementary Education Majors (3)
EDF 503—The Emerging Curriculum (3)
EDF 510—Educational Foundations (3)
EDF 523-Education Behind the Iron Curtain (3)
EDP 550—Advanced Educational Psychology (3)
EDP 557—Essentials of Learning (3)

9:30-11:00 a.m.

EDF 500—Methods and Materials of Research (3)
EDF 502—Methods and Materials of Research for Counselor Education Majors (3)
EDF 504—Middle School Workshop (3)
EDF 507—Values Clarification in Human Relations (3)
EDF 510—Educational Foundations (3)
EDF 581—Philosophy of Education (3)
EDP 550—Advanced Educational Psychology (3)

11:00 a.m.-12:30 p.m.

EDF 500—Methods and Materials of Research (3)
EDF 510—Educational Foundations (3)
EDF 516—Resource Allocation in the Schools (3)
EDF 580—History of American Education (3)
EDP 569—Adolescent Development and Learning (3)
EDU 501—Curricular Adaptations for the Disadvantaged (3)

6:00-9:30 p.m.

EDF 500—Methods and Materials of Research (3) Mon. and Wed.
EDF 510—Educational Foundations (3) Tue. and Thu.

Social Work

Six-Week session in Social Work (See description in "Workshops/Other Special Offerings")

5:30-8:30 p.m.

SWO 520—Theory for Social Work Practice (3) NEW Mon. and Wed. July 17 through August 25
SWO/CRJ 543—Social Rehabilitation of the Offender (3) Tue. and Thu. July 17 through August 25
SWO 521—Social Group Work with Women in Transition (3) NEW (See Social Work listing in Pre-Session)
SWO 522—Family Therapy in Social Work (3) NEW (See Social Work listing in Pre-Session)

Special Education

8:00-9:30 a.m.

EDA 541—Psychology of Exceptional Children (3)

8:00 a.m.-Noon

EDA 540—Workshop in Special Education (4)
(See "Summer Workshops/Other Special Offerings")

Speech Communication and Theatre

11:00 a.m.-12:30 p.m.

THA 550—Summer Drama Workshop (3-9) (See "Summer Workshops/Other Special Offerings")

Speech Pathology and Audiology

8:00-9:30 a.m.

SPP 525—Advanced Diagnostic and Therapeutic Methods in Speech Pathology (3)

11:00 a.m.-12:30 p.m.

SPP 516—Neuromuscular Disorders (3)

6:30-9:00 p.m.

SPP 535—Seminar in Audiology (3) (See "Summer Workshops/Other Special Offerings") Mon., Tue., Wed.

To Be Arranged

SPP 560—Graduate Clinical Practicum (1)

Post Session

Monday, August 7 through Friday, August 25

See the 1977-1978 Graduate Studies Bulletin for course descriptions. NEW, following a course listing indicates a course not previously offered or currently described. Descriptions for these courses appear in this publication beginning on page 38. All offerings listed are contingent upon sufficient enrollment. Semester hours of credit are shown in parentheses following the course title. Classes meet Monday through Friday during Post Session unless otherwise noted.

Art

6:00-9:30 p.m.

ART 534—Ceramics Workshop: Raku (3) Mon. through Thu. (See "Summer Workshops/Other Special Offerings")

Biology

8:00-9:30 a.m., 10:30 a.m.-Noon

BIO 587—Systematic Zoology (3)

Counselor Education

8:00-9:30 a.m., 10:30 a.m.-Noon

EDC 545—Psychometric Interpretation (3) (for Reading Majors)

9:00 a.m.-Noon

EDC 598—"Cognitive Behavior Modification: Self-Applications and Practical Implications" Workshop (See "Summer Workshop/Other Special Offerings")

9:00 a.m.-4:00 p.m.

EDC 598—"Career Development Programming: A Practical Approach for Practitioners" Workshop (See "Summer Workshop/Other Special Offerings")

EDC 598—Skill Developing in Counseling: A Helping Model Workshop (See "Summer Workshop/Other Special Offerings")

Earth Sciences

To Be Arranged

ESS 520—Geology of National Parks (4) (Must have permission of instructor-Johnson)

ESS 580—Astronomy of England (3) (Includes two week field trip to England) Must have permission of instructor-Reed.

Elementary Education

8:00-9:30 a.m., 10:30-Noon

EDE 549—Theory and Trends in the Language Arts (3)

EDE 553—Child Development and Behavior II (3)

EDE 554—The Child's Self Concept (3)

EDE 580—Workshop in Elementary Education (3)

EDE 582—Workshop in Social Studies (3)

Geography and Planning

To Be Arranged

GEO 592—Area Field Study—Puerto Rico (3) (See Workshops/Other Special Offerings)

Health

(See also Physical Education)
All Permits to Register must be signed by Dr. Edward N. Norris.
Telephone scheduling:
May 8, 2-5 p.m.
May 9, 9-11 a.m.
In person scheduling:
May 10, 4-6 p.m.
May 11, 6-8 p.m.

6:00-9:30 p.m.

HED 621—Human Sexuality in a Changing Society (3) (Formerly HED 542) Mon. through Thu.

History

8:00 a.m.-Noon

HIS 534—French Revolution and Napoleonic Era: 1789-1815 (3)
HIS 561—The Indian in America's Past (3)

Instructional Media Education

8:00-9:30 a.m., 10:30 a.m.-Noon

EDM 533—Television in Education (3)
EDM 563—Field Study in Educational Media (3)

Mathematics

8:00-9:30 a.m., 10:30-Noon

CSC 550—Computers in Education (3)
MTE 552—Mathematics for the Disadvantaged (3)

Music*

8:00-9:30 a.m., 10:30 a.m.-Noon

MUS 530—Classroom Guitar Pedagogy (3)

Workshops

MUS 592—Marching Band Techniques and Materials (3) "Marching Band Conference and Workshop" August 7 through August 11 (See "Summer Workshops/Other Special Offerings").
MUS 661—Jazz Practices Workshop (2 or 3) August 14 through August 18 (See "Summer Workshops/Other Special Offerings").

Physical Education

(See also Health Education)
All Permits to Register must be signed by Dr. Edward N. Norris.
Telephone scheduling:
May 8, 2-5 p.m.
May 9, 9-11 a.m.
In person scheduling:
May 10, 4-6 p.m.
May 11, 6-8 p.m.

8:00-9:30 a.m., 10:30 a.m.-Noon

PED 581—Adapted Physical Education (3) (Formerly PED 531)

Psychology

5:00-8:30 p.m.

PSY 517—Introduction to Psychopathology (3) Mon. through Thu.

Reading

8:00-11:00 a.m.

EDR 515—Reading in the Content Areas Secondary (3)

Secondary Education and Professional Studies

8:00-9:30 a.m., 10:30 a.m.-Noon

EDF 509—Contemporary Teaching Trends (3)
EDF 510—Educational Foundations (3)
EDO 511—Environmental Outdoor Education Workshop (3)
EDS 502—Secondary School Curriculum (3)

*School of Music
Counseling by telephone or office appointment Call or write Dr Singleton 8:00 a m -4 30 p.m., April 24-May 11, Swope Hall, Room 11, phone 436-2539 **All Permits-to-Register** must be signed by Dr Singleton

Social Work

5:30-8:30 p.m.

SWO 520—Theory for Social Work Practice (3) NEW (See Social Work listing in Regular Session) July 17 through August 25

SWO/CRJ 543—Social Rehabilitation of the Offender (3) July 17 through August 25 (See Social Work listing in Regular Session)

Special Education

5:00-8:30 p.m.

EDA 555—Psychology of Learning Disabilities. (3)

Speech Communication and Theatre

8:30 a.m.-Noon

THA 516—Creative Dramatics (3) (See "Summer Workshops/Other Special Offerings")

Speech Pathology and Audiology

To Be Arranged

SPP 570—Administration and Supervision of Speech and Hearing Programs (3)

SUMMER WORKSHOPS/ OTHER SPECIAL OFFERINGS

Art

Studio Workshops
All three sessions

A number of workshops, open in nature, in drawing, painting, ceramics, and weaving are offered through all three sessions. They are for beginners as well as the more experienced. Scan the course listings for details.

Art Education in the Elementary School (ART 551)
A course in art education exploring the use of cultural and community resources as the focus for teaching art appreciation in the elementary school.

Biology

Mini-Courses in Biology

Enthusiastic response to West Chester's mini-courses in biology has resulted in more of these one-week sessions being offered this year. Nature lovers of all age groups and varying levels of proficiency will enjoy the many field trips to observe and learn about the many species of plants and birds native to the local area. Each course will meet for five days from 9:00 a.m. to 12:00 noon and from 1:00 p.m. to 3:00 p.m.

July 10 through July 14	Summer Birds (BIO 517)
July 17 through July 21	Summer Wildflowers (BIO 516)
July 24 through July 28	Common Trees of Chester County (BIO 515)
July 31 through August 4	The Living Forest (BIO 512)

Counselor Education

August 7 through August 16, 1978
Skill Development in Counseling: A Helping Model Workshop (EDC 598)

This workshop will dwell on the improvement of counseling skills which are useful in various settings. Emphasis will be on personal development, skill acquisition, and skill development as related to the various counseling techniques that have applicability in various helping settings.
Counseling techniques will be developed and strengthened through the utilization of role-playing mini-counseling sessions and practice with actual clients. The use of audio and video counseling sessions will be an integral segment of this workshop. Lectures and discussions of the various

techniques that will improve counseling skills will also be included.
The primary goal of this workshop is the improvement of your individual counseling skills.

August 7 through August 16, 1978

Career Development Programming: A Practical Approach for Practitioners (EDC 598)

The workshop will focus upon both the content of career development programming as well as the many contextual variables that affect the behavioral outcomes manifested by consumers of the service. There is a planned balance between didactic and experiential sessions exposing participants to topics ranging from how to generate a strong rationale for the program to how an effective evaluation should be constructed and executed. Emphasis will be placed on the application of system design and objective-based programming formats as the vehicle for career development programming.
This performance oriented workshop will actively involve participant in each phase of program development, examination and evaluation of a wide range of resource materials, exploratory visits to various sites, and interaction with visiting instructors.
The goals of the workshop are to enhance the participant's awareness of the vocationalization aspects of human development and to acquire the necessary skills for translating the knowledge into workable programs to facilitate their client's career development.

August 7 through August 25, 1978

"Cognitive-Behavior Modification: Self-Applications and Practical Implications" Workshop (EDC 598)

This workshop is designed to meet three interdependent objectives: (1) students will conceptualize, diagnose and change human behavior according to an integrative approach to behavioral psychology referred to as Cognitive-Behavior Modification. (Meichenbaum, 1977); (2) students will systematically apply this new approach to behavior change to a self-selected behavior through a process referred to as self-management (Kahn, 1976); (3) students will develop diagnostic and behavior change strategies for potential application in their particular work setting.
This performance based workshop will use an array of didactic (lecture, demonstration, audio-visual media) and experiential (simulation, self-application) processes to teach students who to conceptualize and use a cognitive-behavioral paradigm to diagnose and change human behavior (their own and potentially others). This cognitive-behavior paradigm extends beyond traditional behavior modification approaches by integrating cognitive development psychology with operant and respondent

paradigms. In so doing, covert (in the head and under the skin) and overt (directly observable) behaviors are analyzed in the context of when and where they occur (antecedent stimulus factors) and the consequences that accrue from their emission. This functional cognitive-behavioral analysis will provide the data base from which comprehensive intervention strategies can be developed and employed in purposeful behavior change.

Although the experiential focus of this workshop will revolve around self-application, the implications of this behavior change model for school personnel will be addressed throughout the workshop. Through in-class activities and homework assignments students will apply strategies of self-monitoring, self-measurement, self-handouts and textbook reading assignments. Student evaluation will be an on-going process, with baseline measures of knowledge and skill serving as the criterion against which learning is assessed.

Earth Science

Geology of England (ESS 581)
Regular Session

The major rocks, minerals and fossils of England and how they are used in the development of geologic principles.

Astronomy of England (ESS 580)
Regular Session-Post Session

The development of astronomical theories and equipment in England, from prehistoric times until the 20th century.

Foreign Languages

Regular Session June 26 through August 4

Individualizing and Personalizing Foreign Language Instructions (LAN 580)

A course in new theories and techniques in foreign language education will be offered during the Regular Session, 1978 for 2 or 3 credits. Students must register with Ronald L. Gougher, Director of Summer Workshops, Department of Foreign Languages, West Chester State College. Students may participate in another course offered in regular session if prior permission is acquired.

Geography and Planning

Conservation Workshop (GEO 571)
Regular Session June 26 through August 4

Sponsored jointly by the Department of Geography and Planning and the Brandywine Valley Association, the workshop investigates selected tech-

niques of resource-conservation and resource management in the general environs of southeastern Pennsylvania and evaluates the place or contribution of these techniques in the over-all scheme of regional planning.
Off-campus visitations and discussions with actual practitioners, rather than classroom lectures, constitute the experiential bases for student learning.
For further information about the workshop or scholarship monies available from the Brandywine Valley Association, contact Charles W. Grassel, Chairman, Department of Geography and Planning (436-2940, 436-2343) (3 credits shown under Regular Session).

Geography and Planning

Geography Area Field Study — Puerto Rico (3) (GEO 592)
August 7 through 25

The Department of Geography and Planning is sponsoring a study tour to the island of Puerto Rico. Students will take field trips throughout the island including a visit to the El Yunque Tropical Rainforest, journey via air to the Virgin Islands, tour the city of San Juan, visit to old Fort El Morro, trips to Ponce and Mayaguez, tour of a rum distillery, visit to an industrial concern and other interesting places. Accommodations will be at a hotel within the famous Condato section of San Juan with access to the beach. Meals are not included because there are restaurants in the vicinity of the hotel, both expensive and not so expensive. The group will leave Philadelphia via Eastern Airlines on August 9 in the morning and return August 16 in the evening. Three undergraduate or graduate credits will be offered for the course which is open to all interested students. A paper is required. There is ample leisure time on the itinerary to visit the beach, go shopping or do as you please. This is an opportunity to vacation while you learn and earn three credits. For additional information, contact Dr. George Langdon, 409C Anderson Hall, Phone (215) 436-2363.

SPECIAL ASIAN STUDIES PROGRAM

Studies in the History and Culture of South Asia (3) (HIS 501)
Pre-Session

Field Studies in the History and Culture of India (6) (HIS 660)
Regular Session
(Student Field Trip to India)

Depending on funding from the United States Department of Health, Education and Welfare, West Chester State College plans to conduct a study tour to the Indian subcontinent. International travel and living expenses will be provided to qualified applicants by HEW. For further infor-

mation, details and reservations contact Dr. Robert J. Young, Department of History, as early as possible.

The program provides an opportunity for a six week period of further study in those areas of the Indian sub-continent's culture and history which have been explored in HIS 501 or HIS 301. Field Studies will emphasize aspects of the religious, cultural and historic traditions of both Hindu and Muslim Society in North India.

HIS 301 or HIS 501 (or an equivalent course offered elsewhere) is considered a prerequisite for this program. In exceptional cases the prerequisite may be waived with the permission of the tour leader, Dr. Robert J. Young.

MUSIC

Music Education Workshop (MUS 513 or 514)
July 17-July 21

The workshop will include intensive examination and utilization of **Silver Burdett Music** books and materials for the classroom teacher. Participants will select the level of classroom music best suited to their needs. The focus of instruction will be on innovative and creative ways of teaching the basic skills and concepts of music. Instructors will include **Silver Burdett Music** authors and consultants and Music Education Department faculty members. The course may be taken for three credits. For further information, contact Dr. Richard Merrell, School of Music, phone: 436-3337.

Marching Band Conference and Workshop (MUS 592)
August 7-August 11

Designed primarily for high school and college directors and students, this conference is sponsored by the West Chester State College Marching Band and the School of Music. Offerings include flag, drum major, rifle, and twirling instruction for both intermediate and advanced sections; clinics in intermediate and advanced percussion; separate classes for students and directors. Outstanding authorities will participate. The course may be taken without credit or as MUS 592—Marching Band Techniques and Materials for 3 credits. For information about this ninth annual band event, contact Dr. James R. Wells, Marching Band Director, School of Music, phone: 436-2495.

Jazz Practices Workshop (MUS 661)
August 14-August 18

Nationally-known jazz artists will offer classes in stage band direction, contemporary improvisation, arranging, and the pedagogy of improvisation. Designed primarily for anyone who is or will be involved with some

type of jazz activity in the public schools, the workshop will accommodate those with little or no experience to those already actively involved in this field. Optional graduate credits available at regular fees. Two credits: five days. Three credits: five days plus arranging or improvisation project. For further information concerning the workshop and its faculty, contact Mr. James Sullivan, School of Music (Phone: 436-2678).

Physical Education

Summer Dance Workshop/Effective Projection in Theatre and Dance (PED 536)
June 19 through July 7

This three-week course will be conducted on Tues. and Thurs. from 7:00 to 10:00 p.m. on one of the stage areas of the college by Dr. Charles B. Smith. It will include the development of dance from the studio to the stage, emphasizing staging, lighting, costuming, makeup, and the projection of the dramatic idea in movement. The workshop will culminate in a public performance which will include workshop participants assisted by members of the theatre dance group.

Social Work

Six-Week Sessions
June 5 through July 14 and July 17 through August 25

Two six-week sessions of two courses in social work each will be run in the Summer of 1978. SWO 521, Social Group Work with Women in Transition, 5:30 p.m., Monday and Wednesday, and SWO 522, Family Therapy in Social Work, 5:30 p.m., Tuesday and Thursday, will start on June 5 and run to July 14. SWO 520, Theory for Social Work Practice, 5:30 p.m., Monday and Wednesday, and SWO 543 (CRJ 543), Social Rehabilitation of the Offender, 5:30 p.m., Tuesday and Thursday, will start on July 17 and run until August 25. These courses are designed for advanced undergraduate social work majors, criminal justice majors, or individuals holding a baccalaureate degree or those currently pursuing graduate studies in Social Work.

Special Education

Workshop in Special Education (EDA 540)

The summer workshop in special education is an intensive six week course which has as its primary focus direct teaching contact with mentally and/or physically handicapped students. Participants work with handicapped students four days each week, with the fifth day reserved for field trips and meetings with consultants and speakers. A typical day starts with an academic instructional period of one hour, followed by a

two hour period working with handicapped children, and then a short period summarizing the morning's activities. This summer the workshop will be held for the 17th year and like all the others will be held at an off-campus school for the handicapped. The majority of students who enroll are special education teachers working for certification. A growing number of participants are regular class teachers and other professionals interested in the practice of mainstreaming handicapped children or otherwise simply interested in an exploratory experience in the field of special education. (Permission of the instructor is required.)

Speech Communication and Theatre

Summer Drama Workshop (THA 550)
Regular Session

An intensive combination of applied classroom instruction and practical production experience in repertory summer stock. There will be daily seminar-practicums each morning with production applications in the afternoons and evenings.

Workshop in Creative Dramatics (THA 516)
August 7 - August 18

Will be held 8:30 a.m.-12:30 p.m. daily plus two afternoons to be arranged. An exploration into the use of creative dramatics as a teaching method. Research and application of theories and techniques to be highlighted by working with children in a variety of settings. Credit may be earned in THA 516.

Speech Pathology and Audiology

Seminar in Audiology (SPP 535)

Seminar topic will be "Auditory Perceptual Disorders and Learning Disabilities." Although the seminar is designed for graduate students in speech pathology, it may be taken with the instructor's permission by graduate students in other fields. There are no specific prerequisites.

NEW COURSE DESCRIPTIONS

Below are brief descriptions of summer offerings not described in the 1977-1978 issue of the Graduate Studies Bulletin. For further information, contact the appropriate department. The listing is alpha-numerical by course prefix and number.

CHE 503—Chemistry of the Environment (3) A discussion of the chemistry of the atmosphere, the hydrosphere and the biosphere and of man's impact upon these areas. Specific topics include ecology, the chemistry of the atmosphere's role in life processes, air pollution, solid wastes, the concept of recycling, agricultural chemicals, food additives and radiation in the environment.

CHL 503—Environmental Chemistry Laboratory (2) The purpose of the course is twofold: to provide field experiences in the areas of environmental and energy technology; to provide laboratory experience in methods of analysis currently employed in pollution control.

CHE 585 Theory and Practice of Spectrophotometry (4)
A lecture and laboratory course in physical chemistry with emphasis on research uses of spectrophotometry. The aim of the course is to give students the theoretical background and laboratory techniques to understand and carry out advanced spectroscopic studies.

CHE 579 Chemical Toxicology (4)
A course in the basic principles of toxicological analysis. Special emphasis is placed on documentation, sampling, and verification of laboratory methods and results. The environmental and physiological aspects of chemical toxicity are explored.

SWO 520 Theory for Social Work Practice (3)
A survey of various psychological/sociological theories with emphasis on their application to social work practice.

SWO 521 Social Group Work with Women in Transition (3)
Dynamics of social group work process, with attention given to the special knowledge and skills needed for working with separated, divorced, or abused women.

SWO 522 Family Therapy in Social Work (3)
Social work skills and the social worker's role as a team member working with families in therapy.

FOR MORE INFORMATION . . .

If West Chester State College appeals to you, and you would like to know more about either our graduate or undergraduate programs, please complete the appropriate coupon below and send to the school for a copy of the catalog you wish. We'll be happy to send it to you.

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Are you presently attending college? Yes ☐ No ☐

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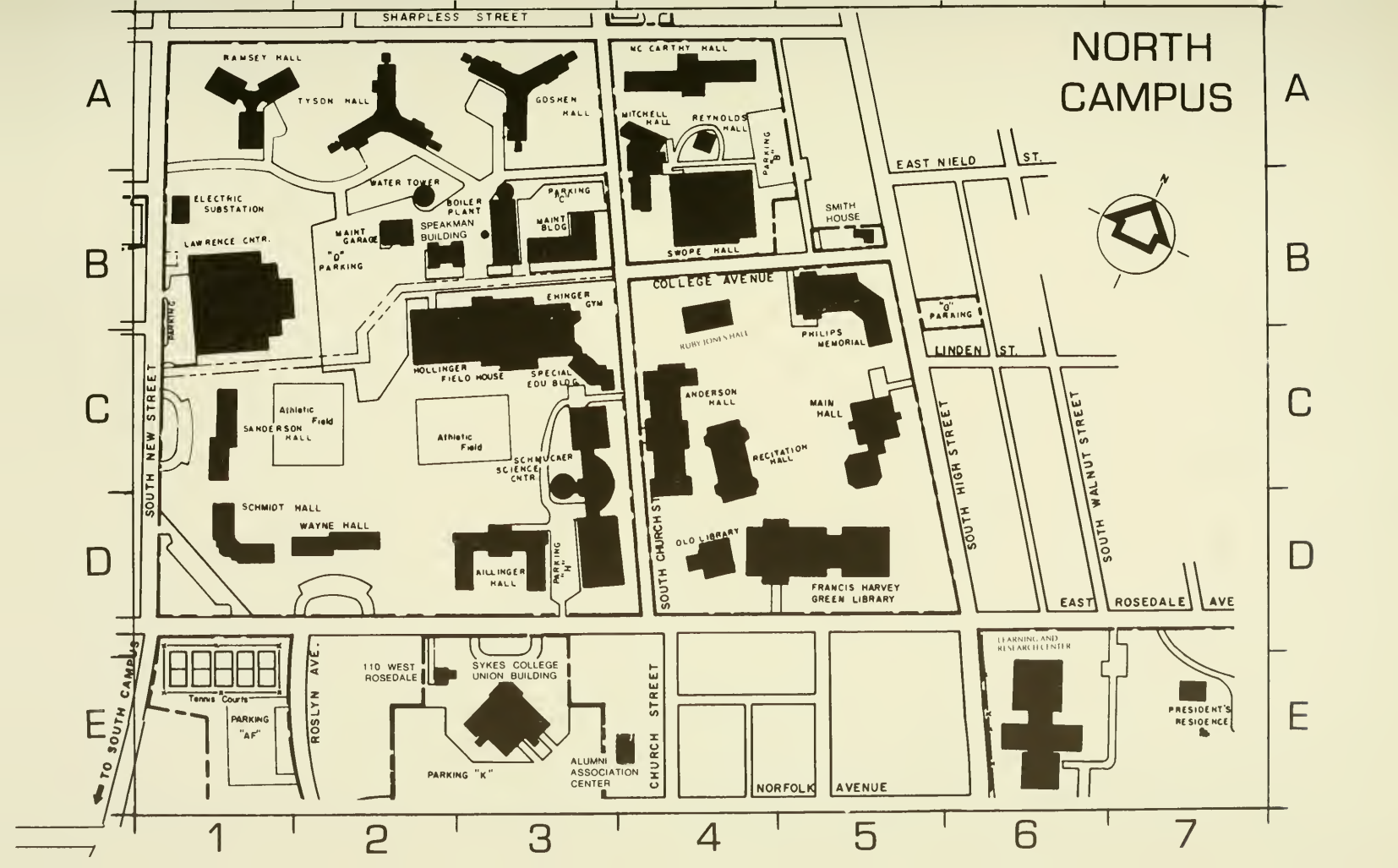
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